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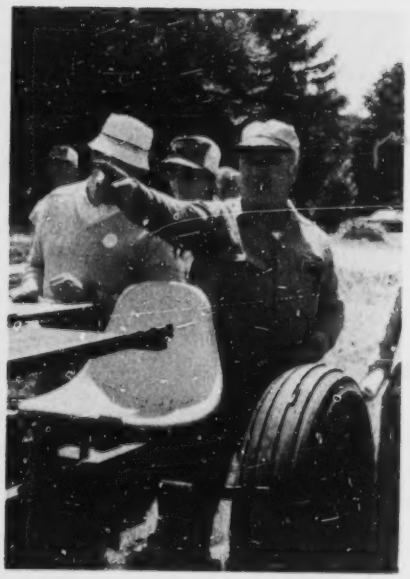
Massachusetts Agriculture

1985

Michael S. Dukakis
Governor

James S. Hoyte
Secretary of Environmental Affairs

August Schumacher, Jr.
Commissioner of Food and Agriculture



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The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02202

MICHAEL S. DUKAKIS
GOVERNOR

JAMES S. HOYTE
SECRETARY

Dear Friends:

We cannot talk about managing our natural resources and protecting our environment without emphasizing how important our agricultural industry is to that effort.

Throughout history, farmers have been the stewards of the soil, the ones who have guarded and cultivated the earth. Farmers understand - perhaps even more than most - the need to respect and protect our environment. While farming as an industry and as a way of life is experiencing serious difficulties in other parts of our country, we in Massachusetts have been relatively fortunate. We are in a period of modest growth and looking forward to opening up new frontiers within our agriculture industry.

In the past 10 years, we have reversed a 30-year decline in the state's farming industry. We have created 1,000 new farms and hundreds of new agricultural families in the process. This has happenend because we in Massachusetts care. Those of you in the farming community and those of us in state government know that agriculture is essential and needs to grow in this state. It provides us with fresher food, more jobs, an enhanced economy and a sound environment.

Fred Winthrop certainly understood the importance of farmers to our environment during ten years as Commissioner of Food and Agriculture. He deserves our deep appreciation and best wishes in his new career. And after a long search for a new Commissioner, we are pleased to have Gus Schumacher on board to expand on Fred's work and set new directions for Massachusetts agriculture. His ideas and enthusiasm will help guide the industry into the next decade and the next century, with an eye toward the environment.

The five priorites on our statewide environmental agenda are to develop an acid-rain control strategy; to better manage our waste; to clean up Boston Harbor; to preserve our open spaces; and to closely protect and manage our valuable water resources. Agriculture is affected in some way by each of those priorities, but is particularly affected by open-space preservation and water-resource protection. More and more farmers are participating in programs which we have developed to deal with those issues. For example, the Agricultural Preservation Restriction program saved more than 15,000 acres of Massachusetts farmland - prime open space - from development. And it's growing. Also, we are encouraged by the success of our Integrated Pest Management program, which has reduced the threat of agricultural pesticides in our groundwater.

The success of those programs and others underscores the fact that farmers are very much a part of the solution to our environmental challenges. Along with Governor Dukakis and Commissioner Schumacher, I look forward to continue working with you to meet those challenges.

Sincerely,

James Hoyte

James S. Hoyte, Secretary

The Commonwealth of Massachusetts

Department of Food and Agriculture

Leverett Saltonstall Building, Government Center

100 Cambridge Street, Boston 02202

Dear Friends of Massachusetts Agriculture:

This past year, 1985, was a time of transition for the Massachusetts Department of Food and Agriculture. It was a year in which more and more Massachusetts farmers began embracing new approaches to agricultural marketing and technology in farm production, while preserving the traditional values of our agricultural heritage.

Fred Winthrop set the pace for those changes during his 10 years as Commissioner. He blazed an important path for Massachusetts agriculture, drafting many of the policies, programs and initiatives which will help bring us into the 21st century.

Inspired by Commissioner Winthrop's achievements and guided by many discussions with you about what must be done to keep the farming industry in Massachusetts prosperous and productive, it is my responsibility, as your new Commissioner, to provide leadership in three key areas.

(1.) We must continue to be creative in the marketing of our many commodities.
(2.) We must maintain our commitment of preserving our precious farmland from ever-increasing development pressures.
(3.) We must be prudent in the management and diligent in the enforcement of our agricultural regulations, particularly in the area of pesticides.

In short, we must tend carefully to the changing need of both the farming industry and the consuming public, giving equal attention to the areas of marketing, farm preservation and regulation.

The Department continued to make great progress in those areas during Fiscal Year 1985, first under Fred Winthrop and then under Lew Wells, our Director of Regulatory Services, who served as Acting Commissioner for five months until I was sworn in June 3.

The statistics in this annual report, along with the narratives provided by the various Division Directors and Managers, indicate that Massachusetts agriculture - with several exceptions - remains on a relatively even keel, despite certain economic factors which often threaten that stability.

More specifically, cash receipts from farm marketings in calendar year 1984 - the latest year for which complete statistics are available - totalled approximately $385 million, an increase of four percent over 1983. Leading the field were our dairy and cranberry industries, each of which represented 22 percent of our total cash receipts. The growth of our cranberry industry is particularly noteworthy. Just a decade ago, it represented only six percent of our total farming industry.

We also witnessed a marked growth in businesses devoted to agricultural biotechnology. Environmental Affairs Secretary James Hoyte and I visited a number of farms where those exciting things are happening in Massachusetts agriculture.

We have reason to be optimistic about the future of agriculture in the Commonwealth. We should, however, temper that outlook with a realistic view of the situation in which the industry has found itself nationally. Although the farming industry in Massachusetts is quite small in comparison to other states, it certainly is not immune to the problems which continue to plague farmers nationwide, especially in our vital dairy industry. In 1986, our Department will be making a special effort to assist dairymen in adjusting to new federal policies, such as the whole herd buyout and lower price supports for milk.

The recently-enacted federal Farm Bill may provide some relief eventually, but we in Massachusetts should, in the meantime, continue to strive for the same level of excellence we have achieved throughout history.

If we are willing to continue our diversification effort and keep ourselves open to new concepts in production, farm preservation and especially marketing, I am confident that we can keep the Commonwealth's agricultural economy healthy. I look forward to working with you to make that happen.

I also want to give a special note of thanks to my entire Department staff. They work hard, are underpaid and often less recognized than they deserve. In 1985, we started a series of programs in training, management and computers that should assist our staff.

And finally, a particular note of thanks to all the commodity groups, the Farm Bureau and most importantly members of our key boards, such as the Agricultural Lands Preservation Committee, the Pesticide Board and the Advisory Council. I especially enjoyed working closely with the outstanding members of both our important Agricultural Board and the Natural Resources and Agriculture Committee in the Legislature.

Sincerely,

August Schumacher Jr

AUGUST SCHUMACHER JR.
Commissioner

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PHOTO CAPTIONS

Front Inside cover:
(clockwise from top left)

1. (left to right) Trudy Buckley, volunteer at the Quincy Farmers' Market; Joseph Puleio, Dorchester farmer; Esther Sanger, Founder of the Quincy Crisis Center, Father Frederick Barr, Director, Quincy Interfaith Sheltering Coalition; Scott Berberian, farmer; Commissioner of the Department of Food and Agriculture; August Schumacher, Jr.; State Sen. Paul Harold of Quincy and Anneli Johnson, Market Master of the Quincy Farmers' Market. The group gathered at the Quincy Farmers' Market to launch the new "Farmers Feeding People" program. The program has been implemented in Quincy and several other communities across the state. Photo by Jennifer Rich-Smith.

2. Former Commissioner Frederic Winthrop, Jr. and then Acting Commissioner Lewis Wells, Jr. attend the Massachusetts Agriculture in the Classroom Advancement Luncheon in Framingham. Photo by Diane Baedeker.

3. August Schumacher, Jr. is sworn in as Commissioner of Food and Agriculture by Governor Michael S. Dukakis in Nurses Hall at the State House on June 3. Photo by Diane Baedeker.

4. Newly appointed Commissioner August Schumacher, Jr. meets "Tallulah Holstein", mascot of the National Holstein Association Convention held in Springfield in June. Photo by Janet Christensen.

5. Guests at a special preview of The Flower Show at the Bayside Exposition Center, Boston, enjoy "A Taste of Massachusetts". The promotional theme was developed this year as a means of introducing the public to the many commodities produced in the Bay State through sampling the products and talking with the growers. Photo by Diane Baedeker.

6. Warren Gove of Leominster explains his farm operation to participants of the "New Technologies in Agriculture" tour of Massachusetts farms in June. Photo by Janet Christensen.

Page 92:

Whately strawberry farmer Timothy Nourse explains his tissue culture procedure to Governor Michael S. Dukakis as Commissioner August Schumacher, Jr. (center) looks on. The Department of Food and Agriculture has been exploring the new technologies in agriculture to help Massachusetts farmers make the most of diminishing farmland and improve the quality and availability of "Massachusettts grown and fresher" products.

Back Inside Cover
(clockwise from top left)

1. U.S. Secretary of Agriculture John Block (left) discusses the Massachusetts Agriculture in the Classroom program with Commissioner August Schumacher, Jr. at this year's Eastern States Exposition in West Springfield. Massachusetts Agriculture in the Classroom is a statewide program organized by the state Departments of Food and Agriculture and Education, assisted by many agricultural and educational organizations to increase awareness of the food and agriculture industry in our state and nation. Photo by Diane Baedeker.

2. (left to right) Joseph Arena, member of the Board of Food and Agriculture; Edward Meehan, John Chruseiel, Fred Magee, and George Hughes, are all beekeepers and represented the Massachusetts Federation of Beekeepers at the "A Taste of Massachusetts" promotion at a special preview of the Flower Show at the Bayside Exposition Center. The promotional display features all the commodity associations of the state and their products and has been used at various agriculture-related activities such as the National Agriculture Day festivities at the State House in March. Photo by Diane Baedeker.

3. Newly sworn-in Commissioner August Schumacher, Jr. (left) presents Lewis Wells, Jr. with a gift of appreciation. Wells served as acting Commissioner in the five month interim between Commissioners Winthrop and Schumacher. He has returned to his previous position of Director of Regulatory Services. Photo by Diane Baedeker.

4. (left to right) Donald Upton, General Manager of United Co-Operative Farmers, Inc., Monya Geller, President of Massachusetts Agriculture in the Classroom, Inc., E. Bruce MacDougall, Dean of the College of Food and Natural Resources, University of Massachusetts, and Frederic Winthrop, Jr., Director of the Trustees of Reservations at the Advancement Luncheon Meeting for Massachusetts Agriculture in the Classroom. Photo by Diane Baedeker.

5. Patricia Rule, Supervisor of Riding Academies for the Department exhibits the new Department publication which she compiled, entitled the Massachusetts Horsemen's Manual. A collection of all Massachusetts laws pertaining to horses and their use, the book was introduced at this year's Massachusetts Equine Expo in Northampton. Photo by Diane Baedeker.

6. Members of the Massachusetts Agriculture in the Classroom, Inc. Board of Directors meet at the Copley Plaza Hotel, Boston. Photo by Diane Baedeker.

Back cover

Edale Smith of Noquochoke Orchards in Westport sell their freshly picked fruit at the Copley Square farmers' market in Boston. Photo by Jennifer Rich-Smith.

Cover photo

It's not unusual to see school children clambering uphill between the rows of apple trees at Smolak Farm in North Andover. Families are welcome at the farm from the annual "Apple Blossom Festival" held in May, and to the fall "You Pick" harvest of apples, peaches, nectarines and apricots. The farm is such a popular place that when one of the owner/operators wanted an apple for his lunch, he searched one of the orchards in vain!

Originally deeded to Captain Asa Stevens in 1746, this 110-acre farm has had a long, productive history. It was purchased by the Smolaks in 1927, and three generations have worked the land growing vegetables and fruit, milking cows and cutting cordwood for sale.

Keeping the farm intact, however, has not been easy for Michael Smolak, his mother Helen, brother Stephen and grandfather Martin. When Michael's father died in 1971, they began a ten year program designed to diversify the farm's production by adding 2,000 fruit trees. By changing and diversifying production from dairy to fruit, vegetables, Christmas trees and cordwood, the Smolaks managed to pay their taxes and earn a living, but the added burden of gift and inheritance taxes due to family deed transfers became more than the farm could bear.

The situation was compounded by a major growth spurt in North Andover, when over 2,000 housing units were built during the 1970's and projections for 1990 call for a population increase of fifty-one percent. As people moved to North Andover for its relatively low tax rates, excellent schools and attractive countryside, property values rose and expensive homes began to circle the farm. Therefore, by selling the development rights, the family hopes to preserve the land which represents centuries of hard work by their own family and ancestors.

After the appraisals were complete, the value of the development rights on this picturesque, rolling countryside revealed itself to be one of the highest encountered to date by the Agricultural Preservation Restriction Program. In suppport of the protection effort, the Town of North Andover contributed $20,000, because the land straddles two watersheds one of which is Lake Cochichewick, the town's water supply. In announcing the farm's acceptance for development rights purchase, the Department of Food and Agriculture emphasized the prime farmland, with the kind of potential that the Smolak land possesses, merits preservation in all regions of the state.

While much of the payment for sale of the development rights will have to be earmarked for taxes, Michael hopes to make several capital improvements. His plans to fill some of the farm's current needs are typical of the investments made by many of the APR participants across the state such as building renovations, equipment replacement, additional land cleared for crops, and construction of a retail stand.

Photo by Diane Baedeker

Annual Report

Massachusetts Department of Food and Agriculture

Fiscal Year 1985

BOARD OF FOOD AND AGRICULTURE

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Joseph Arena, East Boston
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Christopher A. Scangas, Marblehead
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  Warren P. Shepard, Assistant to the Director
  Schiva L. Gandhi, Foreign Trade Specialist
  Charles J. Costa, Statistician
Robert E. Woodruff, Land Use Administrator
  Craig M. Richov, Senior Land Use Planner
  Christine Sullivan, Senior Land Use Planner
  Anne Marie Chickering, Land Use Administrator
  Calvin J. MacLean, Field Agent

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  Dr. Victor LaBranche, Chief Veterinary Health Officer
  Harvey H. Smith, Supervisor of Poultry Products
  Patricia L. Rule, Supervisor of Riding Academies

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Robert Bennett, Supervisor, Standardbred Programs

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Ellen M. Hart, Head Clerk

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Margaret E. Havey, Executive Secretary

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Lewis F. Wells, Jr., Director

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George L. Pittman. Supervisor of Inspection

James M. Cassidy, Chief Bureau of Farm Products
George Porter, Chief Market Investigator

John B. Kelley, Chief, Bureau of Milk Marketing
Robert J. Cassidy, Senior Accountant

Jeffrey Carlson, Chief, Bureau of Pesticides
Mark Buffone, Licensing and Certifications
Paul F. Gosselin, Quality Control and Emergency Response
Gail Kaprielian, Enforcement
Louis S. Scarano, Registrations

Peter C. Kuzmiski, Chief, Bureau of Plant Pest Control
Alfred R. Carl, Jr., Chief Apiary Inspector

Massachusetts Agriculture 1985 was produced by the Public Information staff: Janet M. Christensen, coordination and supervision of editing and production; Diane J. Baedeker, graphic design and production; Christopher R. Phillips, editing; and Lisa H. Hulien, editing and word processing. Special thanks are extended to all Department staff who gave their aid and cooperation in this project.

Division of Agricultural Development

The Division is comprised of the Bureau of Land Use, the Bureau of Markets and the Foreign Trade Section. The reports of the respective Bureau Chiefs and the Foreign Trade Section Specialist provide in detail the accomplishments of each unit in this calendar year.

Great and commendable progress has been made in all areas of endeavor by the diligent effort of the staff who have succeeded well above the normal level of accomplishment.

Specifics of planning by the Divisional units have been formulated to continue the successful activities and functions of the Division.

John Fitzgerald, Director

Bureau of Land Use

The protection of both privately and state-owned agricultural land and the wise use of our public land resources for farming and gardening are the main objectives of the Bureau of Land Use. The past year has been a productive one for the Bureau of Land Use, as over 134 farms are protected state-wide through the APR Program, positive steps have been taken to ensure continued agricultural use of our state lands, and a record number of gardeners are involved in our community gardening effort.

Outlined are presentations on the most important activities of the Bureau of Land Use for fiscal year 1985.

Agricultural Preservation Restriction Program

The Agricultural Preservation Restriction (APR) Program was established by the Legislature in December, 1977, to protect the Commonwealth's rapidly diminishing farmland resources through the purchase of Agricultural Preservation Restrictions, commonly known as development rights. It is a voluntary program whereby farmland owners apply to the Department of Food and Agriculture to sell a restriction on all or a portion of their property. After field inspections, a screening and selection process, appraisals, and approval by the Agricultural Lands Preservation Committee, the Commonwealth acquires these deed restrictions, which run in perpetuity, and prohibit all activities that would destroy or impair the land for farming. Title to the land still rests with the landowner who enjoys all the traditional rights of the property ownership, such as the right to privacy, the right to lease or sell the land, and of course the right to farm the land.

Since the program's inception, more than 13,000 acres have been protected state-wide. There are also more than 11,000 acres currently under appraisal. During the past six years the Legislature has appropriated five million dollars for each of the first four years, twenty million dollars in 1983, and another five million in 1984 for a total of $45 million to fund the program. The Massachusetts program is the most intensive farmland preservation program of its kind in the country and is being used as a model by other states considering similar farmland protection techniques.

Background

An active farmland preservation role by the State's Department of Food and Agriculture has come none-too-soon for Massachusetts, as over a million and a half acres of land in farms have gone out of production in the state since World War II. During the two decades between 1951 and 1971 it has been estimated that between 11,000 and 12,000 acres of farmland were lost annually in the state because of urban conversion. The tremendous loss of farmland in Massachusetts has slowed during the past decade, but the loss of farms and farmland continues. One just has to drive around the countryside to witness new houses going up in fields and orchards that were recently in active agricultural production.

The loss of agricultural land in most areas of Massachusetts will undoubtedly continue, because the value of land for development purposes is greater than its value for agricultural purposes. The economic incentive to sell the farm for non-agricultural uses is often too tempting for a farmer to resist, or the land is simply just too expensive for the farmer's children or neighboring farmers to purchase. It is this disparity in land value for development versus agriculture that makes the Commonwealth's Agricultural Preservation Restriction (APR) Program work.

APR Program Objectives

The main objective of the Agricultural Preservation Restriction Program is to protect productive farmland through the purchase of deed restrictions and revitalize the agricultural industry by making land more affordable to farmers and their operations more financially secure. The specific goals of the Program include the following:

1. To save the best and most productive agricultural land remaining in the Commonwealth and;

2. To provide an opportunity for farmers to purchase farmland at affordable prices and;

3. To help farmland owners overcome estate planning problems and to address other personal ownership problems such as age, health, retirement and;

4. To release the equity "locked-up" in the land and therefore provide working capital to enable farm operations to become more financially stable and;

5. If other program objectives are met, to protect scenic open space and environmentally sensitive lands and;

6. To develop a positive attitude among farmers, agribusinessmen, landowners and urban residents that agriculture in Massachusetts makes an important contribution to the state's economy, food supply and rural character.

Status of Farms Already Protected

All of the farms that are currently in the APR Program are checked from time to time for compliance with the terms of the Preservation Restriction. At this time, none of the farms have been cited for violation of the restriction, and all of the land currently protected remains in active agricultural use.

During the summer of 1982 the Land Use Bureau staff conducted a research project on the status of the protected farms in terms of land use, ownership, types of farm improvements, and changes in the farm operation, with the objective of determining how the APR monies were being spent and how the preservation restriction affected the farm. A total of thirty farms were visited and interviews held with the owners. The following conclusions and statistics were drawn from these field visits.

Of the thirty farms protected, eleven (or thirty-six percent) had changed ownership since the preservation was completed. Out of the eleven farms that were sold, nine were purchased by family members or neighboring farmers and two were bought by new entry farmers. In the case of the sales to family members and neighbors, the sellers were all at or near retirement age, and they went on record as saying the APR Program helped them meet their retirement and ownership objectives. Thus, it is clear that the APR has been successful in helping farms pass from one generation to the next. Each of the 134 farms in the APR Program will again be inspected in the summer of 1985.

Current Status of the APR Program

There have been 134 farm properties covering 1[illegible],000 acres of land protected by the APR Program since its inception. These farms range in size from a fifteen acre highly intensive market garden to 350 plus acre dairy operations. Included among these farms are apple and peach orchards, specialized vegetable farms, small fruit operations (mostly strawberries), general forage crop and livestock farms, field crops such as potatoes, cucumbers and grain corn, diversified dairy farms and specialized dairy farms. The types of farms in the Massachusetts program are an excellent cross-section of the types of food producing agricultural enterprises in the State.

The distribution of the farms reflects the major agricultural regions of the state, and the Program is continuously progressing in these areas. One of the Program's major objectives is to continue to add more restricted land in the vicinity of those farms already protected, in order to secure large areas of land for agricultural production. More and more landowners are becoming familiar with the program, and the assemblage of large blocks of protected farmland is underway in a number of towns, including Westport, Lunenburg, Dudley, Hadley, Amherst and others.

Cities and towns are actively encouraged to participate in the APR Program and local contributions now stand at $988,708, with $409,150. contributed in FY 1984. The impact of proposition 2½ appears to have had some negative impact on local contributions, but overall there is strong local support for the program and many towns are now annually appropriating modest amounts for APR purchases.

Rapid Increase in Land Values in 1985

For the first five of the six years of the APR Program, land values remained relatively stable with $1,600. per acre the state-wide average for the development rights. In 1984-85, however, land values escalated rapidly in many sections of the state resulting in a doubling of the cost of development rights ($3,300. per acre). As a result, it is anticipated that between $10 million and $15 million dollars may be spent in FY '86 up from four million in FY '85. This will necessitate bond appropriations for FY '87 in the range of $15-20 million dollars in order to justify acceptance of applications beyond July of 1986 and retain long range confidence in the APR Program.

In conclusion, with the development rights removed from 3,000 - 4,000 acres of farmland per year through the APR Program, it is clear that the Program is filling a vital role in stemming the loss of farmland in Massachusetts. With high demand for farmland for residential housing and a resultant escalation in land values, however, it is becoming clear that the APR Program is only one means, albeit a major tool, for farmland preservation. Increasingly, each community with precious farmland resources it wants to preserve will have to take the lead role in developing strategies to preserve its remaining agricultural lands. Accordingly, the APR Program is mapping farmland by ownerships,

Table 1. Status of Applications Received

	Number of Applications	Acres	Actual Purchase/ Estimated Purchase Price*
A. Acquisition Complete	134	13,163	$21,013,410.
Final Vote Completed:			
B. Under Purchase and Sale Agreement	40	3,505	10,716,100.
C. Voted To Appraise	110	11,497	28,742,500.
D. Voted To Appraise but Landowner refused offer	71	8,233	20,582,500.(1)
E. Eligible projects awaiting action	35	3,325	8,312,500.(2)
F. Little Likelihood of funding due to low rating	121	9,916	22,900,000.
G. Rejected	17	525	945,000.*
TOTAL	538	49,856	$116,458,210.

1
Landowners have initially refused offer; however, circumstances may change and the projects can become viable at anytime.

*
Denotes estimated purchase price calculated by multiplying $1600. (state-wide average cost/acre) times the acreage of each group.

SUMMARY OF APR PROGRAM FOR ADMINISTRATIVE EXPENSES: FISCAL YEARS 1980-1985.

	FISCAL 1980	FISCAL 1981	FISCAL 1982	FISCAL 1983	FISCAL 1984	FISCAL 1985	TOTAL
MARKET VALUE APPRAISAL SERVICES	$62,420.	$106,796.	$91,147.	$ 88,827.	$177,549.	$180,778.	$707,517.
FARM VALUE APPRAISAL SERVICES	$25,750.	--	$ 9,112.	$ 4,601.	$ 23,838.	$ 17,418.	$ 80,719.
REVIEW APPRAISAL SERVICES	$ 8,891.	$ 13,258.	$ 27,349.	$ 36,267.	$ 34,555.	$ 48,828.	$169,148.
LEGAL SERVICES	--	$ 7,427.	$ 47,482.	$ 26,664.	$ 56,628.	$ 40,996.	$179,197.
SUPPLIES AND EQUIPMENT	$ 1,900.	$ 1,358.	$ 499.	$ 2,620.	$ 1,515.	$ 1,982.	$ 9,874.
MUNICIPAL CONTRIBUTIONS FOR SERVICES	$ 633.	--	$ 1,650.	$ 750.	$ 12,224.	--	$ 15,287.
TOTAL PROGRAM ADMINISTRATIVE EXPENDITURES	$98,961.	$128,839.	$177,239.	$159,729.	$306,309.	$290,002.	$1,161,742.
NET PROGRAM ADMINISTRATIVE COST TO COMMONWEALTH	$98,298.	$128,839.	$175,589.	$158,979.	$294,085.	$290,002.	$1,146,455.

SUMMARY OF AGRICULTURAL PRESERVATION RESTRICTION ACQUISITION EXPENDITURES: FISCAL YEARS 1980--1985.

	FISCAL 1980	FISCAL 1981	FISCAL 1982	FISCAL 1983	FISCAL 1984	FISCAL 1985	TOTAL
NUMBER OF ACQUISITIONS COMPLETED	3	16	23	41	24	27	134
NUMBER OF ACRES	287	1267	2099	3929	2243	3338	13,163
ACQUISITION COST ($ per acres)	$545,000. ($1898)	$2,418,725. ($1909)	$3,631,850. ($1730)	$6,313,925. ($1607)	$2,755,560. ($1218)	$5,348,410. ($1602)	$21,013,410. ($1596)
MUNICIPAL CONTRIBUTIONS THAT OFFSET ACQUISITION COSTS	$ 91,087.	$ 93,800.	$ 175,935.	$ 113,350.	$ 106,386.	$ 415,650.	$
NET PROGRAM ACQUISITION COSTS TO COMMONWEALTH	$453,913.	$2,324,925.	$3,455,915.	$6,200,575.	$2,649,174.	$4,932,760.	$20,017,260.

TOTAL PROGRAM COSTS 1985

TOTAL PROGRAM COSTS	$5,638,412.
TOTAL PROGRAM COSTS TO COMMONWEALTH (Total Costs Minus Municipal Contributions)	$5,222,762.

TOTAL APR PROGRAM COSTS FISCAL YEARS 1980-1985.

TOTAL PROGRAM COSTS	$22,175,152.
TOTAL PROGRAM COSTS TO COMMONWEALTH (Total Costs Minus Municipal Contributions)	$21,163,715.

town by town, across the State not only for APR purposes but to provide each town with a base map of its agricultural resources from which it can develop protective strategies. In 1986, the Bureau of Land Use in collaboration with other interested groups will be preparing a hands-on how-to-do-it handbook of farmland preservation techniques for use by communities. Provided adequate staffing can be obtained, the Bureau will work with individual communities in developing and implementing farmland protection plans.

Robert Woodruff
APR Program Manager

COMMUNITY GARDENS

The moving of some 10,000 cubic yards of prime topsoil from the grounds of the University of Massachusetts Medical Center in Worcester to the inner city neighborhoods of Greater Boston highlighted the activities of the Bureau's Community Gardening Program in 1985.

Soldiers from the U.S. Army used bulldozers, front-loaders, heavy-duty trucks and their own muscles to haul the topsoil to Boston, where it was stockpiled and then taken to various neighborhood gardens by members of the National Guard. That "military assistance" was provided at the request of Governor Michael S. Dukakis and Senator John F. Kerry.

Dubbed "Earth Move '85", the project gave hundreds of residents of low-income areas the opportunity to grow some of their own food on what were once abandoned plots, parking lots and other unused spaces.

Among others lending support and assistance to the project were the Division of Capital Planning and Operations, the Suffolk County Extension Service, the City of Worcester, the City of Boston, the Suffolk County Conservation District and the Boston Urban Gardeners.

Meanwhile, the Community Gardening Program continued to assist gardening groups in both rural and urban areas in developing and improving their programs.

MASS SEED PROGRAM

More than 14,000 kits containing a variety of carefully-selected vegetable seeds were distributed throughout the Commonwealth in 1985 as part of the ongoing Mass Seed Program.

It was the largest distribution yet for the free seed program, which continues to prove itself very popular in low-income rural and urban areas of Massachusetts. In another indication of that popularity, the Bureau received several inquiries during 1985 from other states which are interested in establishing their own seed programs.

The seeds distributed are selected primarily for their adaptability and nutritional value. Two separate kits, each containing ten packets of seeds, are offered to low-income gardeners through the program.

FRUITION PROGRAM

It was another banner year for the Bureau's Fruition Program, which, after five years in operation, has distributed more than 15,000 fruit-bearing and nut-bearing trees throughout the Commonwealth.

Nearly 300 groups - churches, schools, conservation commissions and other civic-minded organizations - have participated in the program. They have landscaped many public-access areas with food-producing plants and trees, proving how relatively simple it can be to productively utilize and beautify public lands.

Calvin J. McLean
Field Agent

State-Owned Farmland Project:

The State-Owned Farmland Project makes state-owned agriculture lands available to educational institutions and private farmers for agricultural use. Most of this land was once farmed by state Human Services institutions which closed their farming programs in the 1960's and 1970's.

The Bureau has also been asked to lease farmlands in the MDC watersheds and in the State Forests, projects which will be undertaken as staffing permits.

The Project has developed a new standard lease, Request for Proposals, and advertising procedures to comply with DCPO regulations. Under the new DCPO law, farmland can now be made available for 5 years with an option to renew for an additional 5 years.

The Project requests transfer of surplus state-owned farmland to the Department of Food and Agriculture to assure its protection as a natural resource. These lands are also made available to educational institutions, communities, and private farmers. To date, the Department has accepted transfer of surplus State Hospital farmland at Danvers, Foxborough, Northampton and Worcester. Danvers is leased to a private farmer and portions will soon be utilized by the Essex Agricultural and Technical Institute. Foxborough will be managed by the local Conservation Commission for community gardens, passive recreation, and lease to a commercial farmer. Northampton is managed by Smith Vocational Agricultural High School for their farming and forestry programs. Worcester will be the site of Central Massachusetts Farmers' Market which will break ground in the spring of 1986. It will also be developed for community gardens for 1987 and continue to be leased for hay.

The Project is in contact with the DCPO/EOHS Campus Planning Project which will result in the surplusing of additional institutional farmland. The Department will request its transfer to further the Project and protect this valuable state-owned resource.

Ammie Chickering, Land Use Administrator

Bureau of Markets

The objectives of the Bureau are to provide direction for local and foreign markets, public information, market news, the milk flavoring program, promotional and advertising programs for the Department, and to assist commodity groups, and the operations of roadside stands and farmers markets in their promotional activities.

The Bureau develops exhibits for trade shows, shopping center malls, agricultural fairs and New England Flowers Shows. The Bureau assists commodity groups with legislative problems, their promotional programs and the marketing of their products, assist produce buyers with their purchases of Massachusetts agricultural products. Staff members attend functions related to marketing and promotion of agricultural products and develop and distribute point-of-purchase and other promotional material to retail stores and roadside stands. An example is our "Massachusetts Grown and Fresher" campaign.

The Bureau conducts seminars at the State House promoting opportunities for the local farmers to meet with buyers and members of the General Court. We conduct farm tours giving the buyers of agricultural products the opportunity to meet the farmer on his own farm. We assist roadside stand operators with their building permit problems, appear at public hearings in cities and towns where problems exist related to roadside permits. We assist greenhouse growers with their building permit problems.

The Bureau allots promotional funds to commodity groups and with the assistance of the promotional committee, supervises the commodity groups promotional programs.

The Bureau also cooperates with the U.S. Department of Agriculture Market News Service in Boston in collecting, publishing and distributing by telephone, mail, radio and newspapers timely information on market prices, supplies and demand of fresh fruit and vegetables at the Boston Wholesale Market and the Springfield Wholesale Market. It is through these reports that growers, retailers and shippers are informed of market conditions and prices.

Marketing is one of the most essential tools in any industry. The Bureau of Markets has made substantial progress in this field for the farmers of Massachusetts, regardless of what commodity they produce. We have made arrangements with buyers in the food industry to purchase and use the products we grow and process. This has been done through advertisement and programs on radio and television and in the newspaper. We have established a market for our vegetables during our producing months and many produce buyers overlook other vegetables coming from other states during this period.

We have all seen the Stop and Shop commercials promoting and advertising "Massachusetts Grown and Fresher" on television. It is a compliment to our Department especially, the Bureau of Markets. It was a pleasure to see several growers also appear in this ad. When one carrot grower broke a carrot and said RIGHT NOW - referring to the freshness of the Mass-grown vegetable - it became more than a commercial, it struck home. It was testimony to the accomplishment to the Department and the Bureau. Working with these large chains to buy and advertise local vegetables does not just happen. Telephone calls and personal visits bring all these things together. We can honestly say that Massachusetts is the only state that makes this effort.

Marketing is our game and we are good at it.

The Bureau also provides an organoleptic evaluation service for the milk industry with the objective of guaranteeing consumer satisfaction with the flavor quality of milk they purchase. Samples taken from milk plants and milk producers range from 5 to 250 per examination with the average monthly total including 50 finished products, 90 blended tank shipments and 755 farm samples.

Marketing of farm products in Massachusetts for 1984 resulted in cash receipts of 384,869 million dollars for the local farmers. Agribusiness in the state is valued at several billion dollars, and food stores represent the largest retail business in the Commonwealth, with some 5,876 food stores which generate sales of over four and half billion dollars.

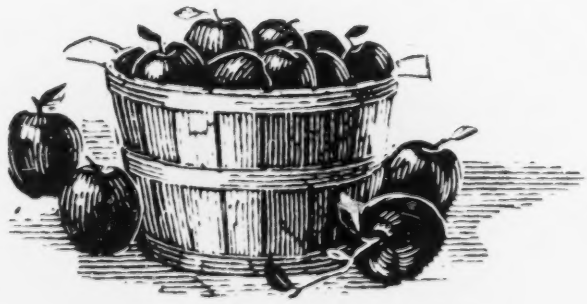
Guy L. Paris, Chief

Roadside Marketing Specialist

Roadside Marketing in the Commonwealth of Massachusetts has become a vital contributor to the economy of the state. There are close to 1000 roadside stands, with an annual volume of more than $100 million dollars of produce. This one form of direct marketing to the consumer by the grower has not only been profitable to agriculture in the state, but also to the consumers who have supported local agriculture and at the same time have saved food dollars buying "Massachusetts Grown" products.

The future of "direct marketing" through the roadside stands looks even brighter in 1986. With plans already started in 1985 to begin a "Roadside Stand/Pick-Your-Own Federation", new doors will be opened to growers, and in turn, help Massachusetts agriculture market its products more effectively.

Robert E. Johnson
Roadside Marketing Specialist



EMERGENCY FLOOD ASSISTANCE PROGRAM

An assistance program for the flooding period, May 30 - June 4, 1984, was signed into law July 11, 1984. The $5,000.00 provided for agriculture funding will expire June 30, 1987.

The original legislation read,"to the Department of Food and Agriculture, an amount necessary for a program of emergency financial asistance for certain losses sustained by any farmer within the Commonwealth during said rainstorm and floods."

After visual inspections, the need for preventative work for prevention of future land damage by floods would be the best method of utilizing cost sharing funds.

An amendment to the original legislation was filed adding the words "and for soil conservation and certain other preventative measures by farmers to minimize flood damage." The amendment was approved May 22, 1985 and applicants were notified of the same.

The Department received 450 applications for restoration and preventative work with a cost estimate of 4.5 million dollars and 30 applications for interest assistance payments totaling $114,057.70.

Cost share payments of 85% of cost totaling approximately $1,000,000.00 have been made to date.

There has been excellent cooperation working with USDA Soil Conservation Service and Agricultural Stabilization Conservation Service who provided estimate costs, engineering and design work for projects and certification of completion.

Charles A. Costa
Statistician

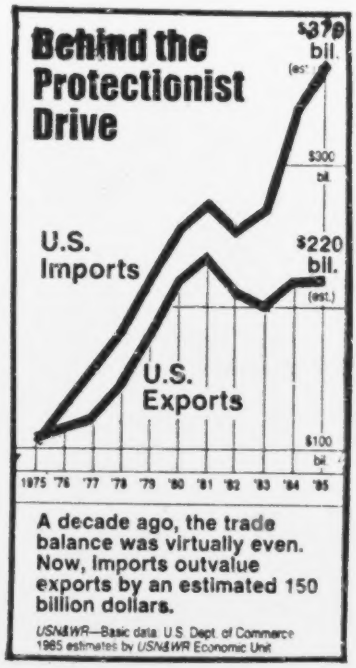
Foreign Trade

With the onset of a world recession in 1981, the export boom in farm products, which was already waning, ended abruptly. Farm export sales have continued to decline, despite the current strong business expansion. The dimensions of the financial stresses on farms are becoming increasingly well known.

Agricultural trade worldwide is enmeshed in regulations and trade barriers. Competition for world agricultural markets has become intense. Demand is no longer expanding as quickly as in the 1970s. Many of our nation's competitors have increased their agricultural output, and the high U.S. dollar has made it harder for this country's agricultural products to be price competitive.

The U.S. dollar has begun to slide. The real rates of interest in the U.S. have declined relative to interest rates abroad. Thus, the U.S. dollar has lost its competitive advantage in terms of interest earnings. This is the major reason for its recent decline (along with soaring federal and trade deficits). However it needs to fall at least 40 percent in order to reverse the trade deficit and boost U.S. manufacturing.

With the U.S. trade deficit climbing toward a record $150 billion dollars this year, up from $123 billion in 1984, trade officials are alarmed by the rumblings of a protectionist avalanche, which could bury the global economic recovery under the rubble of a major trade war. Protectionist pressures are being stoked in the U.S. by the strong dollar, in developing countries by the need to earn foreign exchange to pay off huge debts, in Europe by stubbornly high unemployment, and almost everywhere by the industrial adjustments being forced by technolgical changes.


Behind the Protectionist Drive
$370 bil. (est.)
$300 bil.
U.S. Imports
$220 bil. (est.)
U.S. Exports
$100 bil.
1975 '76 '77 '78 '79 '80 '81 '82 '83 '84 '85
A decade ago, the trade balance was virtually even. Now, imports outvalue exports by an estimated 150 billion dollars.
USN&WR—Basic data U.S. Dept. of Commerce
1985 estimates by USN&WR Economic Unit

The open trade system - the free exchange of goods among countries -is viewed by many experts as the best approach for the economy as a whole. The arguments in favor of free trade are supported by historical evidence. The Smoot-Hawley Tariff Act of 1930, which pushed tariffs on a wide range of agricultural and industrial products to the highest levels in the nation's history, was passed to protect domestic jobs and industry. Just the opposite happened, however. America's trading partners raised their own tariffs, a major trade war developed and international commerce plummeted. Subsequently, U.S. trade policy shifted to the negotiation of reciprocal trade agreements, and in the 1960s and 1970s a decline in tariffs was negotiated through the General Agreement of Tariffs and Trade (GATT).

The 90 members of GATT account for about 80 percent of international trade, and include virtually all major nations in the industrialized (with the notable exception of USSR) and the developing world. These tariff reductions were followed by an acceleration in world trade and economic growth.

In this atmosphere, market development is more important than ever. Historically the U.S. has exported raw agricultural products. Adding value to products by processing, before they are sold abroad, would add significantly to the export earnings. While the U.S. has been hard pressed to maintain a 10-percent share of this expanding market, the EEC (European Economic Community) has used export subsidies and aggressive export promotion to dominate it. Re-directing U.S. marketing efforts and trade programs could close the gap with impressive payoffs for the U.S. economy, employment and trade balance. To this end, the hundred or so Massachusetts agribusiness firms participating in our export programs have been encouraged to launch an aggressive international marketing program for the export of their value added product(s). The Foreign Trade Specialist has assisted a number of these firms in redefining their marketing strategies and in the identification and introduction of their products to new potential world markets e.g. dynamically growing newly industrialized East Asian countries of the Pacific Rim, which have a high ratio of population to arable land in the region, and import over 70-80 percent of their food consumption. The Foreign Trade Section is constantly involved in the identification of new marketing opportunities in different countries, alerting the Massachusetts agribusiness firms and arming them with key information about that particular global area - market situation, estimated market demand for their product(s), nature of internal distribution system, trade laws and barriers, key individuals in the private sector, tariffs and other regulations affecting trade flows.

The Foreign Trade Section actively promoted Massachusetts agricultural products by encouraging foreign buying teams to visit Massachusetts, and hosting meetings between them and officials of the agribusiness firms.

Many agribusiness firms have been incorporating export trade shows into their marketing plan. In April of this year, 10 Massachusetts firms participated in the second National Food and Agricultural Exposition which took place in Kansas City Convention Center. This event was sponsored by the National Association of State Departments of Agriculture (NASDA) and the Foreign Agricultural Service of the USDA. For three days the Convention Center was a thriving marketplace, where several hundred foreign buyers examined, tasted, discussed and bought the products that the U.S. exhibitors had to offer.

Massachusetts, which was in competition with three other States of the Northeast region of U.S., was selected for the biennial NASDA Foreign Trade Show in April 1989. Preliminary groundwork for this show has already begun and the momentum will increase as time progresses.

At the program committee meetings of EUSAFEC (an organization of 10 Northeast State Departments of Agriculture), which are regularly attended throughout the year by the Foreign Trade Specilalist, more aggressive foreign trade initiatives are being undertaken to concertedly penetrate the potential global markets. Many of the small and medium sized firms shy away from exporting, because of their unfamiliarity with foreign markets and their limited resources make it prohibitive for them to introduce new products in these markets. EUSEFEC members have channeled most of their energies in assisting these firms in their market development activities - in-store promotions, placing advertisements in foreigne trade magazines and the promotion of the exhibitors product(s) at overseas international shows.

Plans are underway to add 2 new sectors of the agribusiness community to our expanding effort to assist our food exporters:

1. Assist agribusiness consultants to find markets for their expertise overseas.

2. Assist agritechnology firms in the export of their product(s) to the foreign markets.

Schiva Ghandi,
Foreign Trade Specialist

Division of Animal Health

The Division of Animal Health, with a professional and technical field staff of thirteen and an administrative, supervisory and clerical staff of nine, strives to control or eradicate a series of domestic animal diseases, all of which have a major human health impact. The work is both consumer and industry protective; it assures the former a supply of safe, fresh and cost-competitive foods and food products, the latter a concentration of healthy and disease-free animals from which that food is produced. Market surveillance, testing, inspections, vaccinations and import requirements are primary means by which each disease control program is addressed. The Division works primarily under sections 1 through 48 of Chapter 129 of the General Laws of Massachusetts, plus the Rules and Regulations promulgated thereunder. The FY 1985 Budget for the Division was $633,925.00, allocated through fourteen subsidiaries. A fleet of thirteen state cars, leased from the Motor Vehicle Management Bureau, is assigned to field personnel.

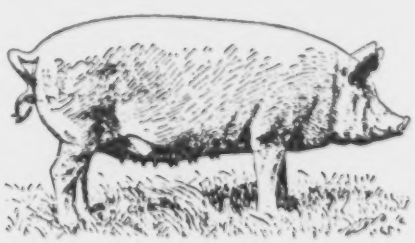
Brucellosis: This bovine-porcine disease causes heavy loss to farmers, abortions and lowered milk production, and human health impairment when it appears as Undulant Fever. Its eradication, county-wide, has had first priority for the United States Department of Agriculture for well over half a century. Recent successes in the northern section of the United States have prompted an increase in hope that the South, despite the problems presented by free-ranging cattle, may yet follow suit. Massachusetts has not had a case of field-strain bovine brucellosis in almost three and one half years and two years ago joined an elite group of northeastern states declared "Free" of this disease. "Free Status" allows the sale of Massachusetts cattle - without further test - to many other states and some countries, and is of inestimable value to our cattle export market. Since Massachusetts heavily imports cattle, we are "at risk" still with this disease and we maintain a strictly-enforced series of programs designed to prevent its reappearance here. At state expense, almost 15,000 female calves are vaccinated between the ages of four and eight months. All of our milk-producing herds are tested at least four times a year, using the Brucellosis Ring Test (BRT). Imported cattle are required to be test-negative before entering the state - and are retested 45-60 days post entry. All cattle are blood-tested at time of slaughter, and every titered animal and any animal whose blood shows any positive reaction is traced back to the heard of origin, - which is then tested in its entirety. Each program covers a specific group: vaccination for calves, the BRT for milking herds, the retest for imported cattle, and, finally, a blood test at slaughter. Our highest priority program, Brucellosis control, is too important to both human-health and our farmer-producers, for any facet to be neglected.

Tuberculosis: This disease, endemic the world over, has made modern resurgence in man, particularly in densely-populated urban areas. It is, however, well on the way to being considered rare in the nation's cattle. Massachusetts has been "Accredited Free" for two years - and has not had a bovine case in more than seven years. Because this too is a serious human-health impact disese, it must be tested-for regularly. All cattle in the Commonwealth are scheduled for a state-paid test every three years. Practically, almost every milking cow is actually tested annually. With this disease also, carcass inspection at slaughter time provides complete coverage for all cattle. Once relatively rare in this milk-producing state, beef cattle are now being raised here in sufficient numbers to require testing and specialized surveillance for TB.

Hog Cholera and other swine diseses: Massachusetts, and the entire country was hog cholera free in fy 1985. Potentially devastating disease such as African Swine Fever (ASF) are, however, found in the Caribbean dangerously close to the U.S. As a result, all swine operations receive regular inspections and routine blood tests are also sent to Veterinary Service Laboratory in Ames, Iowa as part of USDA's national ASF surveillance program. Since the primary line of disease spread in swine is via the uncooked pork products found in garbage, the mandatory cooking of all garbage fed to swine is now a federal as well as state law. In both Hog Cholera and ASF, the state is also at risk, since the numbers of persons traveling to countries in which swine diease is rampant, perchance visiting farms there, or bringing home food products, is well beyond comprehension. Garbage-cooking - mandated here since the mid-thirties - has proven effective. For many swine diseases, vaccines do not provide workable protection. Disease prevention, total by means of import restrictions and specific by means of the heat treatment of garbage, is both workable and cost-effective.

The equine programs: With the position of Supervisor of Riding Academies filled, the licensing of Riding Schools/Stables, Riding Instructors and Equine Transporter/Dealers continues to be well-received. Revenue from these amounted to $32,061.00 in fy 1985. The extension to 24 months for the negative Coggins Test (for Equine Infectious Anemia, EIA) show requirement, for Massachusetts-owned and -shown animals only, continues to work well and almost all of our fourteen counties have been EIA-free for some years. An extensive report of the Commonwealth's experiences with this disease appears in the "Proceedings Book", along with all of the research reports given at a recent international seminar on this disease. Sponsored by the American Quarter Horse Association, the seminar was held in Washington, DC and attracted a great deal of international interest and participation.

A loose-leafed compilation of all of the "horse" laws of Massachusetts was printed this year. Edited by Patricia Rule, Supervisor of Riding Academies, the project received aid from the Massachusetts Society for the Prevention of Cruelty to Animals, the Animal Rescue League of Boston and the H. K. Webster Company of Lawrence.



Testing all pulling animals (horses, ponies, oxen) at fairs for the presence of drugs also receives both teamster and spectator approval. All such tests conducted in fy 1985 proved negative, but these spot-checked blood tests undoubtedly do deter the malfeasance which occurs in other states.

Pet Shop licensing: Although pet shop licensing was designed to be animal-protective, it also serves as a valuable disease control measure. Exotic Newcastle Disease (VVND) poses a tremendous threat to the entire American poultry industry and enters this country, despite tight border controls, with smuggled parrots and other psittacine birds from South America. Pet Shop record-keeping, required by the licensing act, has proven invaluable as a trace-back procedure with exposed birds. A bill forbidding the sale of any but native-bred parrots and macaws was proposed in the Massachusetts legislature in fy 1985, but failed of passage. A similar bill became law in New York state. This concept, perhaps on the federal level rather than state by state, would probably encourage American bird breeders to raise these difficult but very beautiful creatures. With an individual value often well into the thousands of dollars, the South American psittacine bird is much prized by the smuggler.

Poultry programs: Massachusetts, one of the first states to enact poultry-health legislation, as well as one of the first to become "Pullorum-Free", has an experienced if not fully staffed poultry health section. Eggs are regularly inspected, at hundred of retail stores, at packing plants and at all state institutions. Massachusetts Brown Egg Council and its state Poultry Association are both active in promotion and use of the department's "Massachusetts Grown and Fresher" logo. Show poultry is blood-tested and all of our large commercial breeder flocks are regularly monitored. Public interest in the salmonellas is high, and the commonest of those bacteria are found in various areas of poultry production and form the bases for many of our tests and programs. Hatching eggs and chicks are among our most valued exports and must be totally disease free. The Avian Influenza outbreak in Pennsylvania did not extend into New England, but its threat materially improved both the sanitation when poultry is moved to slaughter and tightened biological security around every large plant in the state.

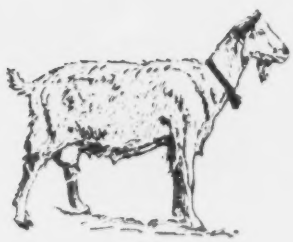
Rabies: With rabies in the raccoon increasing every year, as well as moving inexorably northward from the mid-atlantic region, the public has become sharply aware of the danger. Most towns now have leash laws and almost all require written proof of rabies vaccination before licensing any dog. The presence of a vaccinated canine population to act as a buffer between man and sporadically infected wild animals has, for many years, served as the major control program. The Division records all animal-bite quarantines and works closely with the Department of Public Health, under whose jurisdiction, laboratory diagnoses are made. With the advent of the new Human Diploid Cell (HDC) vaccine for humans, an important addition to our rabies protection procedures has been achieved. This protection is highly recommended for all persons in animal control work who plan to travel into those areas of the world where this disease, almost invariably fatal to humans, is common.

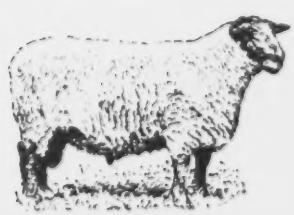
In conclusion: The goal of this Division is the eventual eradication, where possible, of all domestic animal diseases which either directly or indirectly affect human health. We have made progress. Massachusetts is "FREE" in Bovine Brucellosis; it is "Accredited-Free" in Tuberculosis. It is "Pullorum-Typhoid Free" in poultry. It is very close to full-state Validation in Swine Brucellosis. We are free of Swine Pseudorabies and Hog Cholera; we are among a group of states now considered free of Bluetongue.

Those are laurels to wear, perchance - but not to rest on. The Division lost three important positions in fy 1985 - which is more than 10% of our force. We must somehow solve the problem surrounding the diagnostic and controlled services formerly performed by the University of Massachusetts. Both agricultural education and the Extension Services are operating nearer and nearer to the vanishing point. Our farming community needs to know - about such problems as Listeriosis, the Salmonellas, Bovine Leucosis, better Mastitis control and countless other problems, some of which probably are as yet undiscovered. Manpower deficiencies and support systems that erode invariably lead to expensive disease outbreaks. The history of Brucellosis in this country points to this, time after time after time. Only disease prevention is cost-effective; disease eradication has always cost millions. Today it costs billions.

We are indebted to our counterparts at USDA-APHIS (Animal Plant Inspection Services), the Massachusetts Farm Bureau Federation, the University of Massachusetts, the farming community and the Veterinary profession. We have had the support of the rest of the Department of Food and Agriculture and the Secretariat of Environmental Affairs, as well as both the Executive and Legislative branches of our state government. Massachusetts' present status, in domestic animal disease control, has been a joint effort.

Mabel A. Owen, Director





Division of Fairs

Madagascan Hissing Roaches, Termites, fungi and other pests highlighted the State Building exhibit in West Springfield this year. This unusual exhibit truly caught the attention of the passing fairgoers at the "Big E" enabling the Bureau of Pesticides to inform the general public about the safe care and use of chemicals. The building also featured a beautiful landscape garden designed by John Tulluck for the Western Mass. Nurserymen's Association. Some 1,063,113 people visited the Eastern States Exposition in 1984.

Many good things happened in the Fairs Division this year. We printed our new fairs guidelines booklet culminating recommendations from our special study groups. The Equine Division was separated from the Fairs Division in December with the naming of Peter Bundy as Acting Director. This alleviated the Division of the responsibility of overseeing this annual $1,000,000-plus program.

The Rehabilitation Committee met in Boston in December and recommended $90,660 be granted to 42 fairs. The Committee's recommendations were made by reviewing the 44 applications that requested $597,384 for assistance within the following categories; Animal Health, Public Health and Display purposes.

Many thanks are due to the Mass. Extension Service- 4-H, the Western Mass. and the Mass. Fairs Association for their assistance in conducting the following workshops.

-Fruit and Vegetables
-Fair Secretaries
-Canning
-Fair Inspectors

We hope to continue these and add others as they were well received by the fair industry.

The Division continued in its advisory capacity working with the Mass. Wool Board, Inc. and the Equine Exposition Committee. The Wool Board continues to forge ahead producing 100% wool blankets grown and manufacturing in Massachusetts. This year we were able to wholesale over 200 blankets via announcements made on the Department's radio show, "WBZ Country Side". The Equine Exposition enjoyed its most fruitful show by entertaining over 15,000 people at the Northampton Fairgrounds on April 14 and 15. The new attraction of a sales barn really added to the overall excitement.

The total attendance once again dropped in FY'85 due in part to the absence of racing at the Great Barrington Fair and the cancellation of the Berkshire and Weymouth Fairs. 3,181,881 fairgoers attended 99 fairs held in FY'85, as opposed to 3,985,285 in FY'84.

Ten part-time fair inspectors assisted the Director in monitoring the use of prize and rehabilitation monies.

A total of $286,432 were expended by the State for prizes and $154,792 were added by the sponsoring fair association. Exhibits displayed numbered 67,465 of which 28,328 was entered by youth.

Total appropriation from the Legislature for promotions through fairs was $630,494 in FY85.

Stephen Quinn, Director

Thoroughbred Breeding Program

The Massachusetts Thoroughbred Breeding Program has effectively continued to expand in number of farms, acreage and animals bred and raised in the past year.

Our current census shows more than 200 thoroughbred farms and 8,000 acres in horse production.

The breeder, stallion and owner awards of 25 percent, 15 percent and 5 percent of purses won by eligible Massachusetts bred horses amounted to slightly over 200,000 for the past fiscal year. These cash awards were paid for racing at Suffolk Downs and two agricultural fairs. At Suffolk Downs, and two fairs, Massachusetts bred horses started 1206 times, accounting for 120 wins - 126 seconds and 137 thirds.

The stakes-racing program at Suffolk Downs featured 11 races with total purse value at $257,000. These races featured high quality Mass-bred horses competing. Suffolk Downs management appears impressed with the addition of this fresh racing stock and proved it by contributing $82,500 to these races exclusively for Mass breds. The program provided $175,000.

409 mares were bred to Massachusetts stallions during the past year and the stallion roster has improved greatly in quality and quantity in this time. 78 stallions were registered with this Department. Two large stallion stations have been developed in the state, providing several promising sires at stud at each facility.

Currently, Rockingham Park in New Hampshire has provided competition to Suffolk Downs, where the program receives ¼ of 1 percent of the total handle. The handle at Suffolk has dipped slightly, and concern has been expressed over less money being made available to the breeder incentive and stakes racing programs. Hopefully, the problem will be resolved, in a way that will not affect the rapid growth of the horse-farming industry in Massachusetts.

Peter Bundy,
Acting Director of Equine Programs

Standardbred Program

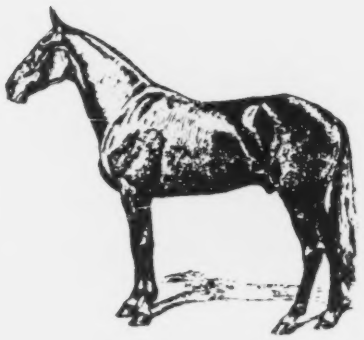
The Standardbred Horse Breeding Program encourages and promotes the breeding, ownership, raising, racing and marketing of Standardbred horses bred in the Commonwealth of Massachusetts. Thus it encourages the keeping of open lands to promote agriculture and agricultural-related industries, such as hay production and composting within the Commonwealth.

Massachusetts continues to breed in excess of 400 mares annually to the 65 stallions registered with the Department of Food and Agriculture and the Massachusetts Standardbred Breeders and Owners Association. The number of acres dedicated to standardbred horse production now stands at 6,300 acres.

Sires stakes racing was held at seven fair tracks with 86 trotters and pacers competing, providing great entertainment for fair goers across the state. We also showcased our two and three year olds in para-mutuel races at Foxboro Raceway. The state spent $375,000, promoting standardbred farms, while the industry added $51,250 from sustaining and entry fees. The Department registered a record 195 yearlings for the sire stakes program in 1985.

The Standardbred Agricultural Fair and Breeding Fund Committee, met several times during the year to assist the Commissioner in continuing to develop a program to better serve the breeding industry.

Robert Bennett,
Supervisor of Standardbred Breeding Program



Division of Regulatory Services

Over the years the Department of Food and Agriculture has been, to a large extent, a regulatory agency.

The regulatory aspects of the Department have been designed to strike a balance between fostering a prosperous and stable agricultural community and protecting the public health and the consumer. Emphasis has been placed on traditional enforcement activities: inspection followed by sanctions in those instances where statutes or regulations were found to have been violated.

In 1985 certain changes have been made. These changes have been carried out to reinforce the goals laid out above. These changes have been in two (2) areas: milk regulation and pesticide control. The first instance of change in the area of milk regulation is an agreement worked out with the state of Vermont, and which by a resolution at the Northeast Association of State Departments of Agriculture (NEASDA) meeting, was extended to the ten (10) northeastern states, whereby increased emphasis will be placed on upgrading the handling of milk from farm to bottler. The procedures agreed to are beyond these required by statute, regulation, or other agreements. This agreement and the attendant NEASDA resolution can be characterized as commitments to upgrade a system which already has given us good quality milk. It protects the public health to a greater extent than do present requirements and protects the dairyman by protecting his greatest asset: a product which has a good reputation.

Also in the area of milk regulation, the Legislature provided for a security fund to protect independent producers (those not members of cooperatives) in the event a handler buying their milk encounters financial troubles and does not pay them. With this fund in place we add to the stability of the milk market and thus achieve our aims: the dairyman has greater protection (contributes to a prosperous stable agricultural community), and stability is imparted to the milk industry (a stable industry delivers good quality milk at a reasonable price).

In the area of pesticide control, the change has been that the regulatory agency has become involved in what has to date been the domain of the land-grant college: applied research. In FY'85 the Department recognized that the Integrated Pest Management funding from the federal government was not sufficient and that state funding was non-existent. With help from the Administration and the Legislature, an appropriation equalling the available federal funds was provided, thus doubling Massachusetts' effort in this important area. Expansion of IPM development into three (3) other crops and adequate support of ongoing work was made possible. Good IPM systems, which result in less pesticide use, support our aims: less pesticide use protects the public health and the environment in general, helps to achieve a stable and profitable agricultural community (in apple orchards savings of twenty-five percent (25%) on pesticide expenditures are common) and good local produce grown under money saving IPM systems benefit the consumer.

These initiatives will continue into into FY86 and beyond. Other initiatives will be taken, such as the development of biological pesticides, introduction of parasites in selected instances, and assessment and encouragement of biological control in general.

The above does not reflect business as usual, nor is it intended to. It is intended to reflect the philosophy that regulation is instituted to achieve a purpose and that competent regulation has productive and positive elements.

Lewis F. Wells, Jr., Director

Bureau of Dairying

The job of Bureau of Dairying is to assure that the consumers of Massachusetts have a sufficient quantity of milk and the highest quality of fluid milk available.

To accomplish this, Chapter 94 of the Massachusetts General Laws requires the inspection of all dairy farms and milk plants shipping fluid milk into the Massachusetts markets.

DAIRY ACTION PLAN

During the 1985 fiscal year, the work of the Bureau intensified greatly. Commissioner Schumacher was instrumental in forming a committee to develop a plan to assure that we are doing all we possibly can to prevent problems with fluid milk in our markets. Toward this end and in cooperation with the State of Vermont one of our major supplying states we have developed a Dairy Action Plan.

The highlights of this action plan were presented in resolution form at the Northeast Commissioners' meeting, held in Portland, Maine in late June, and the resolution was passed unanamiously, bringing the entire Northeast together supporting the principles of the plan.

The overall intent of the Dairy Action Plan is to improve milk hygiene from the farm to the consumer and to do all we can on the home front to prevent problems with milk in the Massachusetts markets.

Some of the highlights of the plan are:

A. All milk in farm bulk tanks shall be cooled to 40°F or less within (2) hours after milking. The blend temperature of any subsequent milkings may not exceed 50°F.

B. All milk received at receiving, transfer or pasteurization plants shall be rejected for use as fluid milk unless the temperature of such milk is 45°F or below and all such fluid milk shall be kept at 45°F or below until pasteurization and after pasteurization, until its ultimate delivery to the consumer.

C. Clarification prior to pasteurization at plants and the use of precoolers and recording thermometers on farms is recommended.

D. State Universities and the Extension Service are encouraged to develop informational bulletins and other educational materials on milk hygiene and disease control.

E. Veterinary authorities shall meet and revise their instructions on reportable diseases in dairy herds and they shall make listeriosis a reportable disease.

F. All states will intensify their efforts to maintain the highest standards of milk hygiene on dairy farms and in processing plants.

G. F.D.A. is urged to review milk pasteurization time and temperature relationships to establish whether such time and temperature relationships are high enough to kill all pathogenic organisms in our raw milk supply.

H. Further research is encouraged on the diagnosis of listeriosis in animals and the detection of the listeria organism in the raw milk supply.

MASSACHUSETTS PRODUCER AND PRODUCTION NUMBERS

In comparing the 1984 fiscal year report with this year's report; you will note that we have lost 40 producers. This loss continues the recent trend of a 5 to 6 percent annual decline in the numbers of Massachusetts dairy farms per year.

It is interesting to note that although we continue to slip in the number of dairy farms, our total production in the state continues to increase very slightly, as the land and cows are acquired by the expansion of neighboring farms. Massachusetts milk production is higher today than it was 10 years ago.

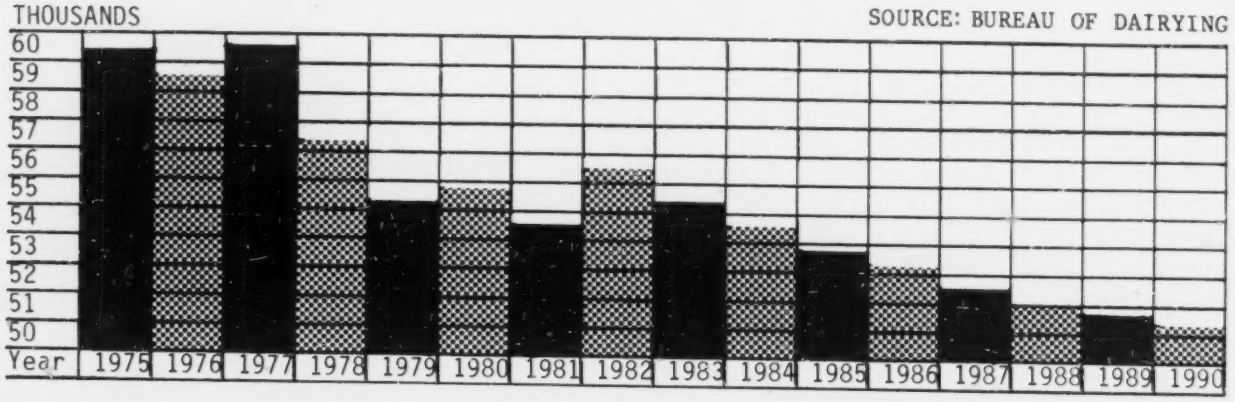
To further highlight dairy trends in Massachusetts, we have developed the following graphs, which point out the number of dairy farms, number of cows and bred heifers and production trends. The 1975 to 1985 figures are factual with the 1986 - 1990 figures inserted only as a projection of what we expect will happen.

COWS AND BRED HEIFERS ON

MASSACHUSETTS DAIRY FARMS

1975 - 1985 FACTUAL

1986 - 1990 ESTIMATED

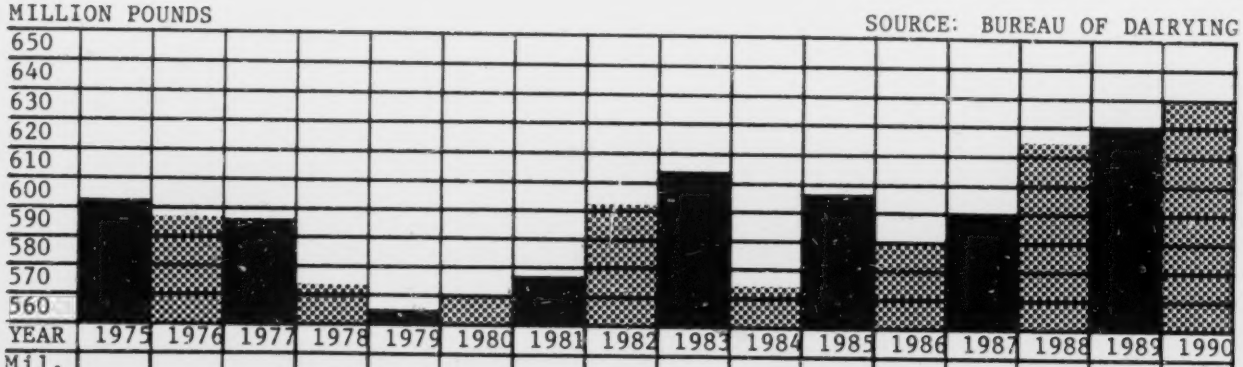


YEARLY MILK PRODUCTION ON

MASSACHUSETTS DAIRY FARMS

1975 - 1985 FACTUAL

1986 - 1990 ESTIMATED



YEAR	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Mil. Pds	601	598	597	572	566	570	578	602	613	573 *	608	590 **	600	625	630	640

* The 1984 production figures dropped due to the milk diversion program which paid participating producers not to produce milk in accordance with the provisions of the Dairy Production Stabilization Act of 1983.

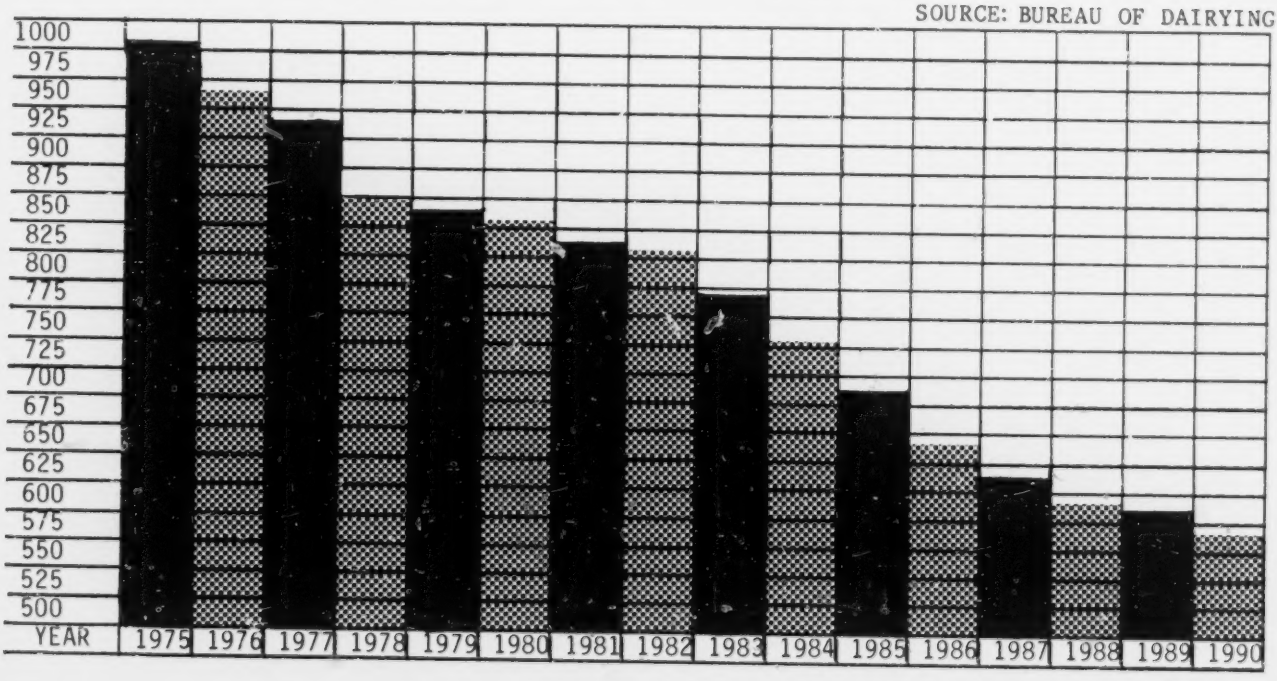
** We expect the 1986 production total to drop because the 1985 Farm Bill allows producers to place a bid for a "whole herd buy-out" and, no doubt, some Masschusetts producers will participate in this program.

DECLINE IN MASSACHUSETTS DAIRY FARMS

1975 - 1985 FACTUAL

1986 - 1990 ESTIMATED

SOURCE: BUREAU OF DAIRYING



REGULATIONS

The Massachusetts Department of Public Health, Division of Food and Drug has formed a committee to develop new milk regulations. These regulations will define the various milks and milk products. They will also set standards and regulations for the milk from the pasteurization plant to the consumer. The Division of Food and Drug has jurisdiction over fluid milk from the pasteurization plant to the consumer in the State of Massachusetts, while the Bureau of Dairying inspects all pasteurization plants outside the State of Massachusetts, who sell their products in this State. In addition we inspect receiving and transfer stations wherever they are located.

Representatives from the Department of Food and Agriculture are on this committee and it is our hope to be able to have these new regulations referenced for use in our out of state milk plant inspection work.

INTERSTATE MILK SHIPPERS PROGRAM

This program currently has the participation of 624 of the 687 producers in Massachusetts. The Bureau of Dairying conducts the Interstate Milk Shippers Program within the State of Massachusetts. Interest in the program is very high because most milk-receiving plants require that an I.M.S rating of at least 90% be maintained by those producers shipping to them.

On July 1, 1986 in accordance with the Interstate Milk Shippers Program, the Somatic cell-count action level will drop to 1,000,000.

Meeting this requirement will help increase the overall quality of fluid milk available to Massachusetts consumers.

MASTITIS PROGRAM

The mastitis program is a completely voluntary program and is conducted by the Bureau of Dairying in the State of Massachusetts only. The intent of the program is to assist our dairy farmers in improving their milk quality by reducing mastitis infections in their herds. Whenever mastitis infections are reduced in a herd, the volume of milk produced by that herd increases; thereby benefiting the dairyman.

Current producer enrollment in our mastitis program is approximately 350, with activity and interest increasing slightly. We expect the demand for the program will increase further when the Somatic cell count action level drops to 1,000,000 on July 1, 1986.

USDA DRY MILK SAMPLING

The Agri-Mark, Inc. plant in West Springfield, MA is the only plant in the state where dry milk is manufactured. Agri-Mark, Inc. has undertaken a major expansion at this plant, and the production of dry milk is increasing accordingly.

A review of our statistics shows that we have spent a little more time on dry milk sampling this year than last and it appears that this effort will continue to increase.

The overall return to the Department of Food and Agriculture from the USDA for our dry milk sampling activities during the 1985 fiscal year was $3,075.91.

OUT OF STATE INSPECTION PROGRAM

On January 1, 1985 we issued 7,091 certificates of Registration to dairy farms in our out-of-state inspection areas. In addition, we have permitted 26 pasteurization plants and 23 receiving or transfer stations in these outlying areas.

The milkshed in which our producers and plants are located remained about the same, with no significant expansions.

STATISTICS 7/1/84 - 6/30/85

STAFF - As of June 30, 1985 - 8 Inspectors; 3 Senior Inspectors; 1 Supervising Inspector; 1 Chief and 2 Secretaries.

During the 1985 Fiscal year, one inspector retired and one resigned. We expect to fill these two open positions shortly.

FARMS

Dairy Farms Inspected: 8,890	Approved: 7,160	Not Approved: 1,730
Dairy Farms Reinspected: 1,922	Approved: 1,559	Not Approved: 363

Ten-day letters sent to producers on reinspection for failure to correct violations on the inspection report: 200

Hearings Held: 11

Producers suspended for failure to comply with the regulations after receiving a ten (10) day letter and/or a hearing being held: 50

Producers reinstated: 18

Other farm visits 1,141

PLANTS

Milk Plants Inspected: 76	Approved: 64	Not Approved: 12
Dealer Visits: 339	Plants spot checked: 17	

SAMPLES

Water samples collected: 157 Milk samples collected: 3

MASTITIS PROGRAM

Herds Sampled: 648 Cows Sampled: 34,154 Samples Collected: 138,242

SAMPLE SURVEILLANCE PROGRAM

Bulk tank samplers checked: 29 Bulk Tank trucks checked: 44

INTERSTATE MILK SHIPPERS PROGRAM

Listed ratings in the I.M.S. Quarterly Publication: 15

Massachusetts Dairy Farms rated: 166

U.S.D.A. Dry Milk Sampling Program: 39 Days

Dealer Registration

A total of 137 Milk Dealers registered with the Bureau during the fiscal year as required by Chapter 94, Section F of the General Laws.

Bureau of Dairying personnel traveled a total of 358,862 miles during the fiscal year to accomplish this work.

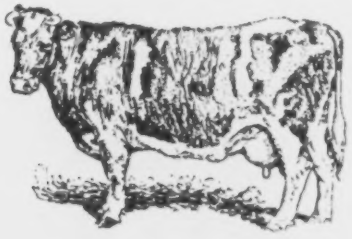
CONCLUSION

I wish to express my appreciation to all of the staff in the Bureau of Dairying for their fine efforts and cooperation throughout the fiscal year. It has been just great and truly appreciated .

Commissioner Schumacher has shown strong interest in our dairy programs and, in conjunction with the administrative staff of the department, we have had exceptional support.

We are appreciative of the Commissioner's leadership and look forward to working with him to continue improving the quality of milk available to Massachusetts consumers.

David L. Sheldon, Chief



Bureau of Farm Products

The Bureau administers a diversified quality-control program for farm products including the Federal-State Fruit & Vegetable Shipping Point Inspection Service and enforcement of the "truth in labeling" laws for feed, seed, fertilizer and limestone programs. In addition, the Bureau regulates certain produce branding labeling and storage laws, and collects over $125,000 per year in registrations and inspection fees which are turned into the Commonwealth's Treasury.

The Shipping Point Inspection Program is regulated by a memorandum of understanding contract with the U.S. Department of Agriculture. All other regulating functions are under the provisions of Chapter 128, General Laws of Massachusetts as amended.

Federal-State Shipping Point Inspection Program:

For more than 75 years, all State Departments of Agriculture in the nation have cooperated with the U.S. Department of Agriculture in providing this service for each state's fruit and vegetable products. This program allows the fully trained and licensed Massachusetts inspector to issue USDA certificates on shipments of fruit and vegetables, attesting to the grade, quality and condition which are needed by buyers and receivers at terminal markets.

For many years, the Inspection Service in Massachusetts, through strict adherence to grades and other essential data, has done much to upgrade the quality, condition and grade of the final product. Massachusetts leads the world in the production of cranberries and many shipments of this product carry a Massachusetts Federal-State certificate.

By law, all apples exported must be inspected. These inspections have been instrumental in helping Bay State farmers maintain their place in this important market. The Bureau has aided in the development of new transportation methods such as containerization and improved refrigeration which have proven to be of value to those exporting apples.

In 1984, demand for our inspection service again has been on the shipment of export apples, mainly to the United Kingdom and Canada. Apples also are inspected for shipment to California, where the demand has been increasing each year, and for military purchases. More than 200,000 bushels of Massachusetts apples carried a Federal-State Inspection Certificate for export.

The export apple inspection is of major importance, due primarily to the demand and acceptance of "controlled atmosphere" stored apples, our valuable McIntosh variety and our quality packs. McIntosh apples cannot be grown successfully in European countries. The controlled atmosphere method of storing apples greatly lengthens the marketing season and allows shipment of apples in good condition well into June, thus providing a more orderly marketing season for the entire apple industry.

Inspection certificates are also issued for potatoes and onions in the Connecticut Valley area and cranberries on Cape Cod.

Feed Program:

2,1000 labels of animal feed, ingredients, pet foods and medicated feed ingredients were reviewed and registered during the past year. Samples of products offered for sale were drawn and tested at the West Experiment Station, University of Massachusetts for conformance with label.

Fertilizer Program:

1,000 labels of fertilizer and limestone were reviewed and registered. Tonnage taxes were assesesed and collected semi-annually. Assessment penalties in shortage of guarantee level were levied and $8,656.67 in appropriate fines collected and either turned back to the farmer or submitted to the Commonwealth's Treasury.

Seed Program:

848 official samples of seed, including agriculture crop seed, lawn mixtures, vegetables, flower tree and shrub seeds were collected and tested for truth in labeling. 52 stop sale orders were issued on violations, covering 457 packages. Seed was removed on account of poor germination, noxious weeds, or because it was unfit for seeding. 28 violations were sent to the U.S.D.A. Seed Branch for further action.

Lime Program:

26 limestone brands and grades were registered and checked for conformance to label during the year. 72,532 tons of lime were applied to the land during 1984. This compared to 64,051 tons in 1983.

Branding Law:

Inspections were made at wholesale, retail, roadside, and farm level to enforce the apple, potato and native laws. Misbranded products are relabeled or removed from sale. Over 3,000 retail stores were inspected, several hundred wholesale and packing house operations were inspected.

Storage Laws:

Records are kept on cold storage and controlled atmosphere apple rooms in order to attest to their compliance with such laws and so to allow such stored products to move into certain prohibited market areas of the country.

The Bureau, through strict adherence to laws, grades, label reviews and other essential data, has done much to upgrade the quality, condition and grade of the final farm product being offered for sale in Massachusetts.

The programs are continuous and reflect the general agriculture crop conditions and the current market situations. The uniform laws and grades allow for the free movement of these products in interstate and export commerce with a minimum of difficulty. The honest label approach ensure the consumer of an accurate farm product of good quality.

Working with other states, USDA, FDA and the various regulated industries has insured a quality farm product that is more easily marketed by the producer and the shipper.

BUREAU OF FARM PRODUCTS STATISTICS

SEED INSPECTION PROGRAM/OFFICIALLY TESTED

	1982	1983	1984	1985
Agriculture	61	48	61	73
Mixtures (lawn)	57	47	33	80
Vegetables	507	409	361	537
Flowers	215	125	101	158
Sprouts	-	8	10	-
	840	637	566	848

52 stop sales orders covering 90 lots on 457 packages of seed removed from sale-poor germination, noxious weeds, unfit for seeding, out of date test. 28 cases turned over to the Federal Seed Act for USDA action.

FRUIT & VEGETABLE INSPECTION REVENUE - FISCAL YEAR

	1982	1983	1984	1985
Apples	$6,012.06	$8,822.93	$8,678.15	$9,218.41
Cranberries	220.00	360.00	280.00	1,321.00
Onions	232.00	700.70	314.02	---
Potatoes	157.50	613.81	920.24	469.00
	$6,421.56	$10,497.44	$10,192.41	$11,008.41

FEED FERTILIZER AND LIME REGISTRATION - CALENDAR YEAR

	1981	1982	1983	1984
Feed/a	1,857	1,939	1,992	2,100
Fertilizer/b	729	691	810	1,000
Fertilizer/c	12	13	20	26
Lime	31	30	32	26

FEED, FERTILIZER AND LIME REVENUE - CALENDAR YEAR

	1981	1982	1983	1984
Feed/a	$46,425.00	$48,475.00	$49,800.00	$52,500.00
Fertilizer/b	18,225.00	18,525.00	20,250.00	25,000.00
Fertilizer/c	1,500.00	1,625.00	2,500.00	3,250.00
Lime/d	775.00	750.00	800.00	650.00
Fertilizer/e	12,952.31	10,571.53	11,888.14	34,475.00
Fertilizer/f	2,760.54	3,858.78	7,101.30	8,656.00

/a Brands
/b Specialty brands
/c Commercial plants
/d Brands
/e Tonnage
/f Penalties

TOTAL - $124,530.00

Registrations and revenue are collected on a calendar year for feed & fertilizer.

Revenue generated by inspection and registration fees totaled $135,538.41.

James M. Cassidy, Chief

Bureau of Milk Marketing

The Bureau licenses milk handlers operating in Massachusetts, retail establishments selling milk in the Commonwealth, bulk tank drivers and individuals testing milk for butterfat content which is used as the basis of payment to the farmers.

Under 331 CMR 7:00 the Bureau will conduct seminars bi-annualy in different parts of the Commnwealth for bulk tank drivers.

The Bureau continues to audit handlers in state regulated areas to insure proper producer payment and announces monthly official and Class I prices to the milk industry.

In 1985 the Bureau of Milk Marketing with the installation of a new data processing system was able to institute the above requirements efficiently. All the Bureau's licensing and record keeping is now in the data base of this system.

After a duly noticed hearing, 330 CMR 21:00, Supervision of Milk Pricing Supply was adopted by the Department. This regulation requires (1) dealer record keeping of certain common costs and price data; (2) concise monthly dealer reports of certain minimum prices; and (3) retailer and sub-dealer reports of substantial changes of supplier.

The Bureau of Milk Marketing holds the sole responsibility within the Department of Food and Agriculture for the enforcement of the provisions of M.G.L.C. 94 which relates to security posted by proprietary fluid milk handlers to protect producers. Total security on file is $1,284,634.00. The amount of security is reviewed on an ongoing basis for compliance with the statute.

The addition of the Mass. Milk Producers Security Trust Fund, which protects independent producers shipping to propriatory handlers, was enacted in 1984 by changes in M.G.L., S. 49, C 10, M.G.L. Ch 20, and M.G.L. Ch 21 Appropriate changes were made in 331 CMR 8.00. This fund showed continuous growth with more independent producers and handlers becoming involved. The amount of money in the fund increased proportionately. The monies collected are deposited monthly into the Massachusetts Municipal Depository Trust. Total invested in the fund as of January, 1986 was $150,325.00.

John B. Kelley,
Chief, Bureau of Milk Marketing

Pesticide Bureau

The Pesticide Bureau is charged with carrying out the intent of the Massachusetts Pesticide Control Act (Chapter 132B of the General Laws) which was signed into law January, 1978. Among its responsibilities, the Bureau licenses and certifies pesticide applicators, carries out the administrative functions of pesticide product registration, enforces the laws and regulations and provides technical information and assistance to state and municipal agencies as well as the general public.

Outlined below are some of the more important activities of the Bureau in 1985.

SPECIAL PROGRAM INITIATIVES

Groundwater Monitoring:

In the spring of 1985, the Department and the Bureau made considerable advances in its groundwater monitoring program when the legislature established positions for a staff toxicologist and an environmental chemist. The Bureau is now developing a data base for the approximately 800 active ingredients used in pesticide products with the toxicologist compiling health-related data, and the environmental chemist compiling environmental fate data. This information will be used by the Pesticide Board Subcommittee in the coming years as it re-evaluates pesticide product registrations.

The ground water monitoring program has also been expanded with the cooperation of the Department of Environmental Quality Engineering and the Department of Public Health. The staff chemist has been coordinating the sampling of more than 300 private wells, largely in the Connecticut River Valley, for the presence of aldicarb, alachlor, ethylene dibromide, carbofuran, dinoseb, oxamyl, 1,2-dichloropropane, and 1,3-dichloropropene which are used in agriculture in Massachusetts.

Integrated Pest Management:

For the second year, the Bureau has secured funding for research and implementation of Integrated Pest Management Programs, making this state one of the few in the nation which actively supports IPM. Today there are six IPM programs which have been developed by the Cooperative Extension Service at the University of Massachusetts-Amherst: Potatoes, Cranberries, Apples, Forage Crops, Turf, and Sweet Corn. Here are some of the accomplishments of IPM as provided by the Extension Service:

** In five years, during which the Apple IPM program was developed, insecticide use was reduced by 26%, miticide use by 54%, and fungicide use by 10%.

** In only two years of operation, the cranberry program has yielded reductions in pesticide use of up to 10%.

** In its first year of existence, the IPM project for sweet corn has shown a potential to reduce insecticide use by as much as 49%.

** The potato program, also in its first year, has made reductions in pesticide use of up to 40%.

The Bureau stands behind further development of IPM programs, not only as a sound way to reduce farmer's costs of production, but also as a sound way to reduce the amount of pesticides used, thus minimizing environmental risk.

Rights-of-way Management Program

The Bureau has reviewed the Generic Environmental Impact Report on herbicide use on rights-of-way and railroad layouts which was completed in January, 1985, and is preparing to promulgate regulations in accordance with the recommendation contained in that report.

Enforcement

The enforcement program increased its staff from two inspectors in April of 1984 to a staff of six by year's end. This increase in staff is reflected in an increase in the numbers of inspections and investigations. FY84 numbers are included in the following table for comparison:

INSPECTIONS & INVESTIGATIONS

Establishment Inspections	FY84	FY85
Restricted Dealers	12	34
Market place	13	18
Producer	10	8
Imports/Exports	1	0
Use/Misuse Investigations		
Agricultural	5	16
Non-Agricultural	25	39
Summary of Violations Cited by Administrative Order		
Misuse of a pesticide	8	12
Non-licensed applicator	13	5
Failure to keep adequate records	9	4
Use of non-registered pesticides	3	0
Distribution of non-registered pesticides	2	12
Potential for causing unreasonable adverse effects	2	8
Other Actions		
License suspension	12	38
License denied	1	0

CERTIFICATION AND TRAINING

Now in its fifth year, the program is upgrading its examination and training procedures to ensure that applicators use pesticides properly and in the most intelligent manner.

The following summarizes the examinations and training activities for FY85.

ACTIVITY	
Examinations Taken	2,359
Training Sessions Approved	111
Applicator Licenses Issued	914
Dealer Licenses Issued	123
Commercial Certifications Issued	1,825
Private Certification Issued	1,497

REGISTRATION

The registration section was involved in many important registration decisions in FY85. These included revoking the registrations of all pesticide products containing the active ingredient chlordane, and the active ingredient aminotriazole. The registrations of products containing pentachlorophenol and bearing directions for homeowner use as an herbicide and any use as a subsurface termiticide were also revoked by the Pesticide Board Subcommittee. The Subcommittee reviewed the registration of Temik(R) (aldicarb), a restricted use pesticide which has leached into the groundwater in some locations of the Commonwealth. The Bureau issued administrative orders to prohibit the use of the product within 1,000 ft. of any public or private well.

REGISTRATION ACTION

Section 24-c (Special Local Needs Registration) granted by the Pesticide Board Subcommittee.	1
Section 24-c's denied	0
Experimental Use permits (EUP's) Granted by the Subcommittee	1
Additions to the State Restricted Use List	19
Products denied Re-Registraiton	0
Product Registration Cancellations	24

BUREAU RESOURCES AND REVENUES

State budget resources identifiable to the Pesticide Bureau were $340,000, which includes $85,000 to support development of Integrated Pest Management projects and $60,000 to carry out investigations into the occurence of pesticides in groundwater. Federal Grants (EPA) totaled $155,000; $85,000 of these funds were used to support the pesticide analytical laboratory with the balance used for the enforcement program and help defray the cost of the pesticide applicator certification and licensing program.

Personnel assigned to the Bureau were: a Bureau Chief, 6 inspectors (including 2 supervising inspectors, one of whom directs the enforcement section), 1 Registration Specialist, 1 Entomologist, 1 Toxicologist, 1 Environmental Chemist, and 3 Clerks.

Revenues collected from licenses, exams, and product registrations were $148,200-- money which goes into the General Fund of the Commonwealth Budget.

Jeffrey L. Carlson, Chief

Bureau of Plant Pest Control

The goal of the Plant Pest Control Bureau is to prevent the introduction and spread of damaging agricultural plant pests into the Commonwealth.

This responsibility is aimed at preventing serious losses to property owners and avoiding the nuisances, the presence, and activities of these pests.

Another direct and beneficial result of this program is that it allows the movement of plants and plant products throughout the country, thereby encouraging fair trade competition. In addition to helping the plant industry, this program helps provide a higher-quality product for the consumer.

The programs of this Bureau are of a continuing-performance nature. They have a direct impact on the public sector by producing a better product or service. The general standard of evaluation for these programs is to maintain their continued performance status. To complete the number of inspections required within the time frame and to respond to all requests for additional inspections would satisfy our goal.

Emergency outbreaks of dangerous agricultural pests have to be considered. This is an unknown factor that must be recognized so that proper plans can be made for controlling outbreaks.

Following are the primary activities and functions of the Bureau:

1. Nursery inspection and registration of agents who represent nurseries.
2. Plant pest survey and trapping programs.
3. Enforcement of state plant quarantines currently in effect
4. Collaboration with federal agencies to enforce quarantines established by the Federal government.
5. Inspection of plants moving to and from other states and countries.
6. Apiary inspection.
7. Public information program.

No unusal pests were found in the 350 nurseries and 49 greenhouses inspected and certified in Massachusetts during 1984.

Common insect pests found were leaf chewers, gall makers, mites, borers and weevils. The Black Vine Weevil continued to be a pest on Taxus and young Rhododendrons and Azalea stock in a few nurseries. Leaf spots, and mildews were the predominant diseases found on deciduous stock.

Agent licenses were issued to more than 300 applicants. Supermarkets, department stores, and garden centers where nursery stock is bought and sold, accounted for the majority of the agent license applications. An applicant for an agents license must list the source of supply as certified by the state of origin. Any uncertified supplier listed would not be accepted for an agents license.

The Gypsy Moth was not a serious pest in the nurseries, but was still quite active in other areas of the state. In 1983 there were 148,000 acres reported defoliated and the 1984 reports show defoliation of 185,000 acres. An increase in defoliation is predicted for 1985.

Pest surveys were conducted for the presence of the European Chafer, Golden Nematode, Gypsy Moth, and Red Steele disease of strawberry. Control area permits allowing the planting of Ribes were issued to 16 applicants.

Collaboration with USDA-APHIS continued with the following activities: Postentry quarantine, 41 locations growing stock in detention. Federal phytos for plant export, 94; federal phytos for apple export, 175 (150,000 bushels); state phytos for plant export, 32; state phytos for tree and shrub seed export, 557.

Cooperative programs continued with USDA included Gypsy Moth, Black Stem Rust and Pest Detection.

Participation continued in the National Plant Pest Survey and Detention program.

Apiary Inspection:

Number Colonies Inspected

Year	No. Colonies	% AFB	% EFB
1983	11,946	3.7	2.7
1984	11,531	1.7	1.2

Estimated Colonies in Massachusetts - 20,000.

A Survey for the Honey Bee Tracheal Mite (Acarapis woodi) as requested by APHIS began on November, 1984. This was in conjunction with the national mite survey to determine the distribution of this honey bee pest.

The annual report of the Chief Apiary Inspector will appear separately.

As of January 1, 1985, 73 samples of 100 bees per sample were examined and found to be free from mites. The survey will continue beyond the January 1 date. Honey bees from certain colonies that may have originated in mite infested states will be collected and examined.

The 1985 apiary inspection program will include the sampling of honey bees for presence of the Tracheal and Varrora Mite and the Africanized bee.

All functions of this Bureau operate by regulatory authority under provisions of Section 16-31A of Chapter 128, General Laws of Massachusetts as Amended.

Legislative bills have been submitted to require the registration of all beekeepers within the state. To require inspection of used beekeeping equipment offered for sale within the state.

Also, to require a certificate of bee inspection be sent to this Bureau prior to bees entering this state from out of state within 60 days. Legislation was also submitted to correct a section of the Plant Pest Law.

P.C. Kuzmiski, Chief

Apiary Inspection

Fiscal year 1984-1985 proved to be a poor honey producing year in the Commonwealth since 1974 (another equally poor year when a nectar dearth existed). Even with excessive rainfall during mid-June (10 inches), drought conditions prevailed through July, August, and September. Honey plants just did not secrete nectar as in previous years. No significant honey crop was produced in Massachusetts in 1984. Beekeepers considered themselves quite fortunate if they did not have to feed sugar syrup during the winter of 1984-1985. This winter proved to be rather mild with numerous warm days providing opportunities for cleansing flights and reorganization of the wintering clusters of worker bees.

Spring population build-up conditions were slightly below average on account of very dry weather. Most colonies were not significantly stimulated by early nectar and pollen sources. Swarming was not a major problem for most beekeepers in the spring of 1985. At this point in seasonal development, 1985 appeared to be as inferior a honey year as 1984.

The hiring of qualified apiary inspectors continues to be a problem as in the past years. There are just not enough capable beekeepers willing to work for the Commonwealth on a part-time basis. Letters publicizing the availability of summer positions were mailed to all county beekeeping associations without one applicant responding. Fortunately, enough inspectors from previous years were hired to inspect, thus providing at least 75 percent inspection of the Commonwealth's hives. 11,531 colonies were inspected out of 16,761 known colonies. Part-time inspectors were hired to inspect Berkshire, Franklin, Hampshire, Hampden, Worcester, Middlesex, Norfolk, Bristol, and Dukes counties in FY 1984-1985. Essex county was added to this group in FY 1985-1986 and Bristol county was deleted because an inspector could not be found. More colonies were inspected for American Foul Brood along with sampling of adult bee samples for our tracheal mite survey than in previous years, considering the number of inspectors hired. This says a lot for the quality and desire of the personnel that were hired.

As of July 5, 1984, tracheal mites (Acarapis woodi) were discovered in south and northcentral Texas by the Texas Department of Agriculture. The Animal and Plant Health Inspection Service (APHIS) of the USDA immediately became involved with survey work along with the decision making process of what to do with this situation. Tracheal mites were also discovered in Florida on October 9, 1984. The Florida Department of Agriculture did a very thorough job of detecting tracheal mites in their survey; 19 counties in Florida were declared infested with tracheal mites. Because of the magnitude of the infestation, no colonies were depopulated in Florida as occurred in Texas.

The Massachusetts Department of Food and Agriculture started sampling for tracheal mites in early October with laboratory analysis of samples progressing in November 12, 1984. This survey, as requested by APHIS in conjunction with a national survey, was to be completed by early January 1985. Seventy-three samples were taken from hobbyists and commercial beekeepers. All samples turned out to be negative.

The Bureau of Plant Pest Control, Apiary Inspection was most fortunate to be allotted space to conduct honey bee dissection in the laboratory of Dr. Michael Peters, Entomology Department, Fernald Hall, University of Massachusetts. Analysis for tracheal mites, Asiatic mites (Varroa Jacobsoni), and Africanized bees (Apis melifora scutellata) will most likely be conducted in FY 1985-1986 in this laboratory.

As of January 1, 1985, Massachusetts was free of the tracheal mite (Acarapis woodi) as determined by our late fall and early winter survey. Sampling in mid-June of a migratory bee keeper who wintered his bees in South Carolina and Florida uncovered an infestation of tracheal mites in Billerica. Most likely mites were picked up in Florida from another honey bee operation. The above mentioned beekeeper does business with prominent Florida beekeeper whose bees have been documented as being infested with treacheal mites by the Florida Department of Agriculture. Colonies with the brand of this Florida beekeeper were found to be mixed into the colonies of the migratory beekeeper who entered Massachusetts.

It was decided by the Acting Commissioner of the Massachusetts Department of Food and Agriculture at the time to continue the survey instead of quarantining the above mentioned beekeeper's colonies. One proposal was made to sample all 4000 colonies owned by this beekeeper to distinguish colonies that had tracheal mites from those that did not. States that opted to depopulate infested colonies, generally depopulated whole apiaries as opposed to individual hives in an apiary.

Preliminary work completed in June (1985) for future sampling of pollinating colonies on cranberry bogs proved to be most successful. Cranberry growers were eager to find out if bees that they were renting might be infested with tracheal mites. Colonies infested with tracheal mites in most cases are less populous as uninfested hives. Several cranberry growers decided not to rent colonies from migratory beekeepers whose bees were found to be infested with treacheal mite by the Maine Dept. of Agriculture while these colonies were being rented to blueberry growers in Washington County, Maine. As previously stated, the Massachusetts Department of Food and Agriculture will continue to monitor for treacheal mites, in addition to Asiatic mites and Africanized honey bees.

Alfred R. Carl, Jr.
Chief Apiary Inspector

ANNUAL STATISTICAL REPORT

Massachusetts Department of Food and Agriculture
Bureau of Plant Pest Control

APIARY INSPECTION

SEASON 1985

COUNTY	No. of Beekeepers	No. of Colonies Examined	No. of Colonies Owned	No. of Colonies W/AFB	No. of Colonies W/EFB	No. of Colonies Ordered Treated	No. of Colonies Ordered Destroyed
BARNSTABLE	155	0	455	0	0	0	0
BERKSHIRE	157	454	470	39	1	30	10
BRISTOL	275	2000	3042	0	3	3	0
DUKES	35	10	145	0	0	0	0
ESSEX	322	1635	2054	26	0	9	17
FRANKLIN	228	585	665	28	14	31	11
HAMPDEN	166	891	991	34	5	24	15
HAMPSHIRE	181	707	807	49	4	43	10
MIDDLESEX	584	3243	3927	72	15	27	60
NORFOLK	345	973	1435	9	3	4	8
PLYMOUTH	377	200	2133	5	8	13	0
SUFFOLK	36	20	104	0	0	0	0
WORCESTER	834	2483	2483	57	9	35	31
TOTALS	3695	13,201	18,711	319	62	219	162

Estimated No. Colonies in Mass. 20,000

% A.F.B 1984 - 1.73
% A.F.B 1985 - 2.42

E.F.B. 1984 - 1.15
E.F.B. 1985 - 0.469

Public Information

Providing accurate information on Department programs and priorities was central to the year's activities. Weekly or bi-weekly releases to media across the state cover Massachusetts grown products in season, current agricultural and food topics, and Departmental news such as pesticide regulations or farms entering the Agricultural Preservation Restriction (APR) Program.

Inquiries from the media often relate to matters concerning the APR Program or the Pesticide Bureau, and the public information staff fields such questions and works with the appropriate staff or the Commissioner's office. There are also regular inquiries by the press on farm production, farmers markets, "pick-your-own" opportunities and the like, which are also handled by this office.

The Department public information program has been enhanced by the work of Diane Baedeker, a staff member concentrating in graphics and visual production. The photography and design of brochures and reports can now be done "in-house", and Diane is also making slide shows and air-quality television tapes of various types of agricultural production and activities. We hope to produce "mini-documentaries" for use on cable TV, and also more and better "public service announcements" in the field for use by commercial and cable TV.

"Massachusetts Agriculture in the Classroom" has again been a priority. We have tried to publicize the value of this program and have produced a brochure which received wide distribution in school systems and at Eastern States Exposition.

The four curriculum units in social studies, science, nutrition and economics are well received in grades 4 through 6, and eighty teachers have spent a day at a workshop being trained by Curriculum Developer Dr. Barbara Garner Koech, who is based at the University of Massachusetts in Amherst. She is already working with a small group of teachers to help develop lessons for grades kindergarten through 3, and in the future it is hoped that units will be developed for grades 7 through 12.

The public information office has helped plan various special events, including the "Celebration of Massachusetts Agriculture" in December of 1984, which was a luncheon to honor departing Commissioner Fred Winthrop and also, at his request, a fundraiser for Massachusetts Agriculture in the Classroom. The public information staff enjoyed working with Commissioner Winthrop and greatly admired his integrity and leadership.

In March on National Agriculture Day, Commissioner Schumacher was introduced at the State House. Since then, the Public Information Staff has followed through on several of the Commissioner's ideas for special events-- including an "agribiotechnology tour" of farms and business from Lexington west to Amherst, which was well received and covered by the press.

Since June, the public information office has had part-time assistance from Lisa Hulien, an English major at UMass-Boston, who has concentrated on writing, especially in the foods area, and also assisted in "Farmers Feeding People," a pilot project by Commissioner Schumacher designed to bring farmers market produce to low income groups in need.

Janet Christensen, Public Information Officer

LEGISLATIVE REPORT

Fiscal year 1985 was a quiet year in terms of the Department's interests legislatively. FY '86 is already proving to be a more active period in this area.

We have already seen passage of the "right to farm" bill (Chapter 613 of the Acts of 1985) which creates agricultural incentive areas. Racing legislation was also passed which will greatly expand our Thoroughbred and Standardbred breeding incentives, and the Spring of 1986 will bring a great deal of pesticide legislation to the forefront.

We do look forward to working closely with House Chairman Steven V. Angelo, and Senate Chairperson Carol C. Amick of the Committee on Natural Resources and Agriculture on a number of issues and concepts of great importance to the Commonwealth's agricultural industry.

Few bills having a direct impact on the Department were enacted into law in FY 1985. Chapter 91 of the Acts of 1985 provides for reciprocity between Massachusetts and states which allow Massachusetts milk to be sold in their state-financed institutions.

Pending before the Governor and awaiting enactment is Senate 1813, "An Act to Inspect Animal Dealers". This legislation would allow duly authorized representatives of humane societies to visit and inspect the establishments of federally-licensed wholesale animal dealers. Previously, these federally licensed dealers were exempt from inspection by Massachusetts humane societies.

Several other bills of great interest to the Department are being reviewed by the House Ways and Means Committee. House 4486 would authorize the Commissioner to enter into contracts with colleges and universities for diagnostic services on behalf of the Division of Animal Health. This legislation would provide much needed continuity relative to payments to laboratories for such tests. House 5553 would establish a system of direct marketing for agricultural products within the Department. House bills 4480 and 1779 are important in that they grant statutory authorization for the placement, of signs on highways which indicate where farmers' markets are to be found.

Some fifteen bills relative to pesticide products and their application were placed into a Committee on Natural Resources and Agriculture study over the summer months. Introduced by the Department, House 165 would establish a pesticides research and risk management fund within the Department. House 166 would clarify the powers and duties of the Division of Plant Pest Control.

Finally, Senate 1811 is currently before the Joint Committee on Counties; this legislation would require the Division of Animal Health to institute a pilot program for a free spaying and neutering clinic. Similar bills are filed each year, aimed at establishing such programs in one state agency or another; it is hoped that, should these ever be reported favorably, a sufficient budgetary allotment will be provided.

Currently we are reviewing the Department's legislative agenda for 1986. We hope to elicit stronger, more favorable responses from the Legislature on those issues which have been raised and disucssed previously. We also look forward to successfully introducing new concepts and ideas for the enhancement of agriculture in the Commonwealth.

Thomas M. FitzGerald
Administrative Assistant

Massachusetts Agricultural Statistics

MASSACHUSETTS DEPARTMENT OF FOOD AND AGRICULTURE

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LIVESTOCK HIGHLIGHTS

INVENTORY

Cattle and calve numbers on farms in Massachusetts on January 1, 1985 totaled 100,000 head, 2 percent more than on January 1, 1984. The total value of this inventory was $56.5 million, or an average of $565 per head. The total value was 31 percent below the record high inventory value set on January 1, 1981, and the average value was $235 below the record high average for 1981. The 1985 inventory consisted of 47,000 milk cows, 9,000 beef cows, 19,000 heifers and 5,000 bulls and steers over 500 pounds, and 20,000 calves.

Sheep and lambs in the Commonwealth totaled 11,000 head on January 1, 1985, about the same as the previous year. The 1980's have produced an upswing in sheep and lamb numbers and returned the level of sheep numbers to those in the 1960's. The average value per head of sheep and lambs at $121 per head, is $18 per head higher than the previous year, and $12 higher than the previous record set in 1982.

Hog and pig inventory of December 1, 1984 in the Commonwealth totaled 40,000 head, 5 percent below the number on hand the previous December. The average value per head for this inventory was $78.50 or 50 cents lower than the year earlier. The total value of the inventory was $3.1 million.

PRODUCTION AND MARKETINGS

The calf crop (calves born) for the year totaled 50,000 head, 2,000 more than in 1983 and the largest since 1978. This reverses the downward trend for the past 30 years. There were 40,000 head of cattle and calves marketed from Massachusetts farms during 1984, with a total live weight of 15.7 million pounds. Farmers received an average of $42.00 and $52.00 per cwt. for cattle and calves respectively during 1984, unchanged from the previous year.

Wool production during 1984 totaled 73,000 pounds, 3,000 pounds less than the previous year. There were 10,000 head shorn during the year with an average fleece weight of 7.3 pounds. This average was 6 percent heavier than the 1983 average and the heaviest since 1974. Production of lamb and mutton in 1984 totaled 801,000 pounds, 13 percent more than in 1983. Marketings for the year totaled 720,000 pounds. Shepherds in the Commonwealth received a gross income of $644,000 for sheep and lambs during 1984, and $49,000 for wool produced.

Massachusetts pig crop (pigs weaned) of 50,000 head in 1984 was 10,000 less than the 1983 crop and the lowest of record. Marketings of pork during the year totaled 9.6 million pounds at an average price of $46 per cwt. This resulted in a gross income of $4.7 million, 6 percent below 1983 and the lowest gross income since 1971.

Mink pelt production in Massachusetts totaled 15,600 pelts in 1984, up 3,100 pelts from 1983 production of 12,500 pelts. Of the pelts produced in 1984, 14 percent were Standard, 38 percent were Demi-Buff, 10 percent were Pastel, 22 percent were Pearl and 16 percent were other colors. Mink females bred to produce kits in 1985, at 4,000, is 200 less than the previous year.

CATTLE: NUMBER AND VALUE OF ALL CATTLE AND CALVES ON FARMS JANUARY 1, MASSACHUSETTS, 1974-1985

YEAR	NUMBER	VALUE	
		PER HEAD	TOTAL
	1,000	Dollars	1,000 Dollars
1974	105	420	44,100
1975	107	315	33,705
1976	107	345	36,915
1977	104	380	39,520
1978	99	415	41,085
1979	102	560	57,120
1980	104	690	71,760
1981	104	785	81,640
1982	98	800	78,400
1983	103	700	72,100
1984	98	595	58,310
1985	100	565	56,500

CATTLE: JANUARY 1, INVENTORY BY CLASSES, MASSACHUSETTS, 1974-1985

YEAR	ALL CATTLE AND CALVES	COWS & HEIFERS THAT HAVE CALVED		HEIFERS 500 LBS. & OVER			STEERS 500 LBS.+	BULLS 500 LBS.+	STEERS, HEIFERS & BULLS -500 LBS.
				REPLACEMENTS		OTHER			
		BEEF	MILK	BEEF COW	MILK COW				
				1,000					
1974	105	8	54	2	15	2	2	2	20
1975	107	9	54	2	17	1	3	2	19
1976	107	9	55	2	17	1	3	2	18
1977	104	9	53	2	17	1	2	2	18
1978	99	8	51	2	16	1	2	2	17
1979	102	10	49	3	16	1	2	2	19
1980	104	9	46	3	16	1	3	2	24
1981	104	10	45	4	14	1	4	2	24
1982	98	10	47	3	13	1	3	2	19
1983	103	10	49	2	17	1	3	2	19
1984	98	8	50	2	14	1	2	2	19
1985	100	9	47	3	15	1	3	2	20

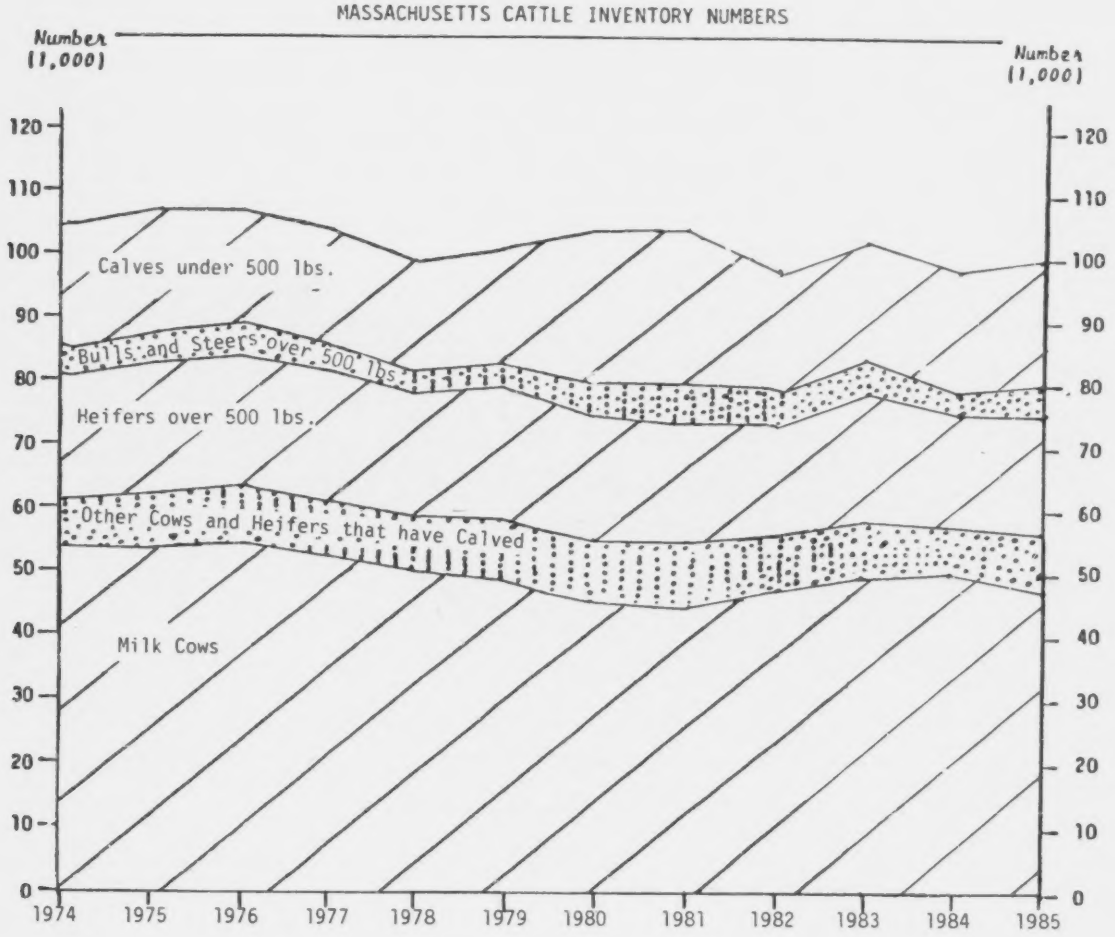
CATTLE AND CALVES: PRODUCTION AND INCOME, MASSACHUSETTS, 1974-1984

YEAR	PRODUCTION	MARKETINGS	PRICE PER 100 POUNDS		VALUE OF HOME CONSUMPTION	GROSS INCOME
			CATTLE	CALVES		
	1,000 Pounds		Dollars		1,000 Dollars	
1974	30,405	32,845	27.50	28.00	473	9,516
1975	35,060	27,812	22.40	24.20	925	7,217
1976	33,620	40,230	26.00	28.50	559	11,071
1977	33,240	40,790	26.20	38.20	676	11,591
1978	27,080	26,560	41.90	57.00	1,441	12,846
1979	22,058	21,858	57.00	76.00	1,471	14,258
1980	24,650	22,830	55.00	71.00	1,892	14,651
1981	21,650	21,610	50.00	63.00	1,290	12,424
1982	17,310	9,390	45.00	57.00	1,548	6,022
1983	20,080	22,930	42.00	52.00	1,646	11,483
1984	20,890	15,710	42.00	52.00	1,659	8,473

CATTLE AND CALVES: INVENTORY, SUPPLY AND DISPOSITION, MASSACHUSETTS, 1974-1984

YEAR	ALL CATTLE ON HAND JAN. 1	CALF CROP	INSHIPMENTS	MARKETINGS		FARM SLAUGHTER	DEATHS	
				CATTLE	CALVES	CATTLE & CALVES	CATTLE	CALVES
				1,000 Head				
1974	105	55	8	27	26	1	2	5
1975	107	56	7	32	22	1	2	6
1976	107	55	7	34	22	1	2	6
1977	104	52	7	35	20	1	2	6
1978	99	50	5	23	19	2	2	6
1979	102	47	1	19	18	1	2	6
1980	104	45	1	21	14	1	3	7
1981	104	47	1	20	23	1	3	7
1982	98	48	1	10	23	1	3	7
1983	103	48	1	23	23	1	2	5
1984	98	50	1	16	24	1	2	6

MASSACHUSETTS CATTLE INVENTORY NUMBERS



HOGS: NUMBER AND VALUE ON FARMS, DECEMBER 1, MASSACHUSETTS, 1973-1984

YEAR	NUMBER			VALUE	
	BREEDING	MARKET	TOTAL	PER HEAD	TOTAL
		Head		Dollars	1,000 Dollars
1973	10,000	50,000	60,000	62.50	3,750
1974	8,000	43,000	51,000	48.00	2,448
1975	8,000	42,000	50,000	64.50	3,225
1976	7,000	43,000	50,000	50.50	2,525
1977	8,000	52,000	60,000	59.50	3,570
1978	8,000	52,000	60,000	76.50	4,590
1979	9,000	51,000	60,000	55.50	3,330
1980	7,000	42,000	49,000	74.50	3,651
1981	6,000	43,000	49,000	79.50	3,896
1982	7,000	39,000	46,000	88.50	4,071
1983	7,000	35,000	42,000	79.00	3,318
1984	5,000	35,000	40,000	78.50	3,140

HOGS: PIG CROP, SOWS FARROWED AND PIGS SAVED, MASSACHUSETTS, 1974-1984

YEAR	SPRING CROP (DEC - MAY)			FALL CROP (JUN - NOV)			TOTAL PIG CROP
	SOWS	PIGS / LITTER	PIGS SAVED	SOWS	PIGS / LITTER	PIGS SAVED	
			Head				
1974	7,000	6.0	42,000	6,800	6.0	41,000	83,000
1975	7,000	6.2	43,000	6,800	5.7	39,000	82,000
1976	6,600	6.8	45,000	5,700	6.5	37,000	82,000
1977	5,000	6.9	35,000	6,500	6.6	43,000	78,000
1978	5,000	7.2	36,000	6,000	6.8	41,000	77,000
1979	6,000	6.5	39,000	6,500	6.5	42,000	81,000
1980	4,000	7.4	30,000	6,000	5.8	35,000	65,000
1981	4,000	6.6	26,000	5,000	6.4	32,000	58,000
1982	3,700	7.5	28,000	4,500	7.6	34,000	62,000
1983	4,900	6.5	32,000	4,000	7.0	28,000	60,000
1984	3,700	6.9	26,000	3,700	6.5	24,000	50,000

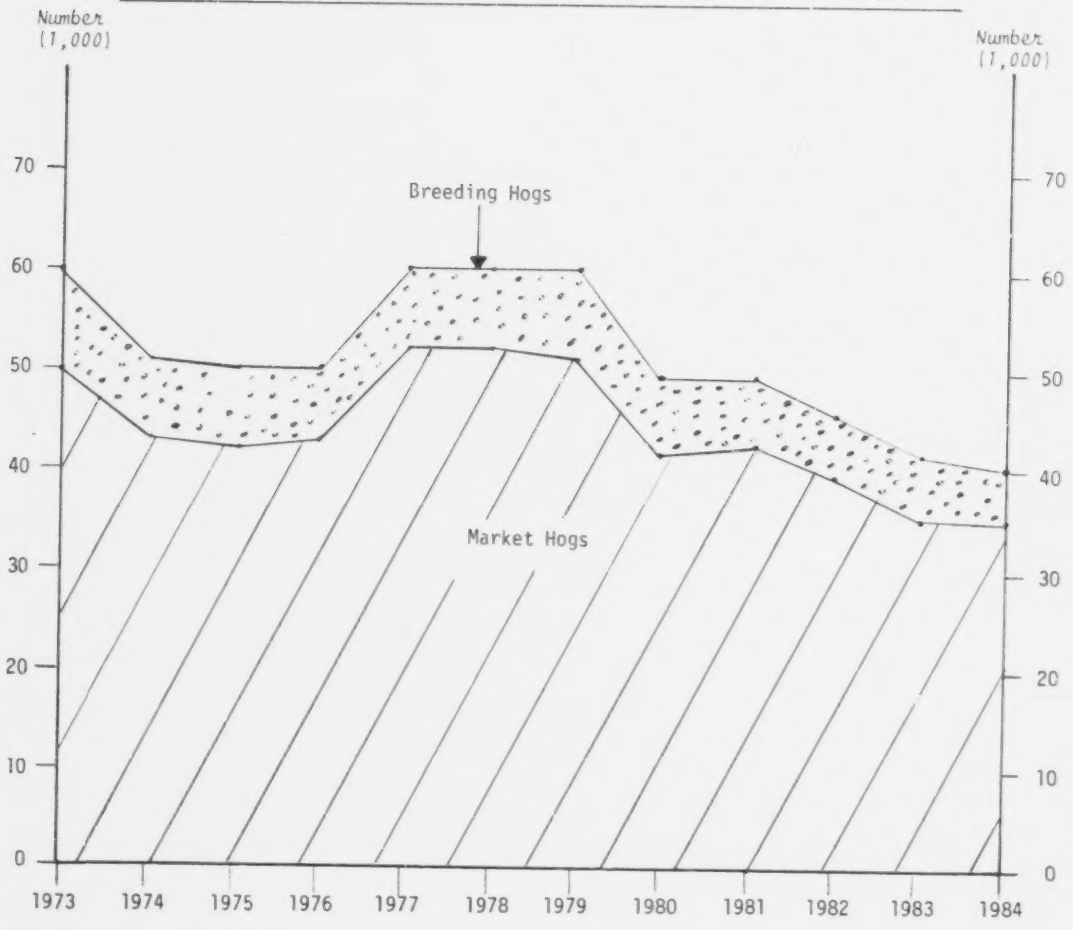
HOGS: INVENTORY NUMBER, PIG CROP AND DISPOSITION, MASSACHUSETTS, 1974-1984

YEAR	ON HAND DEC 1st PREVIOUS YEAR	PIG CROP		MARKETINGS	FARM SLAUGHTER	DEATHS
		DEC - MAY	JUN - NOV			
			Head			
1974	60,000	42,000	41,000	86,000	1,000	5,000
1975	51,000	43,000	39,000	78,000	1,000	4,000
1976	50,000	45,000	37,000	75,000	1,000	6,000
1977	50,000	35,000	43,000	61,000	1,000	6,000
1978	60,000	36,000	41,000	71,000	1,000	5,000
1979	60,000	39,000	42,000	76,000	1,000	4,000
1980	60,000	30,000	35,000	71,000	2,000	3,000
1981	49,000	26,000	32,000	55,000	1,000	2,000
1982	49,000	28,000	34,000	61,000	1,000	3,000
1983	46,000	32,000	28,000	59,000	2,000	3,000
1984	42,000	26,000	24,000	49,000	1,000	2,000

HOGS: PRODUCTION AND INCOME, MASSACHUSETTS, 1974-1984

YEAR	PRODUCTION	MARKETINGS	PRICE PER 100 POUNDS	VALUE OF HOME CONSUMPTION	GROSS INCOME
	1,000 Pounds		Dollars	1,000 Dollars	
1974	18,764	19,910	33.00	254	6,824
1975	19,100	18,260	45.00	347	8,564
1976	17,891	17,378	45.00	354	8,174
1977	15,832	14,063	37.00	291	5,494
1978	17,211	16,640	45.00	304	7,792
1979	18,640	17,820	44.00	297	8,138
1980	16,412	16,185	37.00	500	6,488
1981	13,267	12,825	43.00	290	5,805
1982	14,547	14,380	54.00	316	8,081
1983	11,651	11,010	42.00	378	5,002
1984	9,745	9,600	46.00	269	4,685

MASSACHUSETTS HOG AND PIG INVENTORY, DECEMBER 1, 1973 - 1974



SHEEP AND LAMBS: INVENTORY NUMBER BY CLASS AND VALUE, JANUARY 1, MASSACHUSETTS, 1974-1985

YEAR	LAMBS			ONE YEAR AND OVER		ALL SHEEP & LAMBS	VALUE	
	ALL LAMBS	EWES	WETHERS AND RAMS	EWES	WETHERS AND RAMS		PER HEAD	TOTAL
	Head						Dollars	1,000 Dollars
1974	1,400	1,000	400	5,000	500	6,900	40.00	276
1975	1,500	1,100	400	5,100	400	7,000	46.50	326
1976	1,500	1,100	400	5,300	400	7,200	46.00	331
1977	1,400	1,000	400	4,900	400	6,700	48.00	322
1978	1,600	1,100	500	4,700	500	6,800	53.50	364
1979	1,300	1,000	300	4,900	500	6,700	63.00	422
1980	2,500	2,000	500	7,000	500	10,000	78.00	780
1981	2,000	1,600	400	6,400	600	9,000	88.00	792
1982	2,600	2,000	600	8,000	400	11,000	109.00	1,199
1983	2,600	2,000	600	7,000	400	10,000	104.00	1,040
1984	2,200	1,700	500	8,000	800	11,000	103.00	1,133
1985	2,400	1,700	700	8,000	600	11,000	121.00	1,331

SHEEP AND LAMBS: INVENTORY NUMBERS, LAMB CROP AND DISPOSITION, MASSACHUSETTS, 1974-1984

YEAR	ALL SHEEP AND LAMBS ON HAND JAN. 1	LAMB CROP	MARKETINGS		FARM SLAUGHTER SHEEP & LAMBS	DEATHS SHEEP & LAMBS
			SHEEP	LAMBS		
	Head					
1974	6,900	5,200	1,200	2,600	200	1,100
1975	7,000	5,500	900	2,900	400	1,100
1976	7,200	5,600	1,500	3,300	300	1,000
1977	6,700	5,700	1,100	3,100	400	1,000
1978	6,800	5,300	1,000	2,900	500	1,000
1979	6,700	5,500	800	2,000	500	900
1980	10,000	7,200	2,600	3,800	600	1,200
1981	9,000	7,500	100	3,200	900	1,300
1982	11,000	9,100	3,300	5,200	300	1,300
1983	10,000	8,200	900	5,000	200	1,100
1984	11,000	10,000	2,000	6,500	300	1,200

SHEEP AND LAMBS: PRODUCTION AND INCOME, MASSACHUSETTS, 1974-1984

YEAR	PRODUCTION	MARKETINGS	PRICE PER 100 POUNDS		VALUE OF HOME CONSUMPTION	GROSS INCOME
			SHEEP	LAMBS		
	1,000 Pounds		Dollars		1,000 Dollars	
1974	349	318	17.00	37.00	10	101
1975	372	296	26.00	68.00	35	193
1976	382	393	28.00	72.00	35	244
1977	431	357	29.00	72.00	46	244
1978	406	329	38.00	84.00	67	282
1979	474	210	39.00	85.00	82	215
1980	586	573	42.00	77.00	89	416
1981	479	170	45.00	100.00	89	252
1982	602	654	41.00	94.00	68	465
1983	708	465	35.00	93.00	80	453
1984	801	720	36.00	96.00	91	644

WOOL: PRODUCTION AND VALUE, MASSACHUSETTS, 1974-1984

YEAR	SHEEP SHORN	WEIGHT PER FLEECE	SHORN WOOL PRODUCTION	PRICE PER POUND	VALUE
	Head	Pounds	1,000 Pounds	Cents	1,000 Dollars
1974	6,600	7.4	49	62	30
1975	6,400	7.2	46	31	14
1976	6,700	6.9	46	60	28
1977	6,200	7.1	44	78	34
1978	6,300	6.8	43	74	32
1979	7,000	6.9	48	84	40
1980	9,000	6.9	62	88	55
1981	10,000	6.9	69	90	62
1982	10,000	6.8	68	66	45
1983	11,000	6.9	76	63	48
1984	10,000	7.3	73	67	49

MINK: PRODUCTION AND FEMALES BRED TO PRODUCE KITS, MASSACHUSETTS, 1979 - 1985 1/

COLOR CLASS	PELTS PRODUCED					FEMALES BRED TO PRODUCE KITS				
	1979	1980	1982	1983	1984	1980	1981	1983	1984	1985
Standard	1,600	1,200	1,700	1,400	2,200	1,500	660	500	560	710
Demi-Buff	4,900	5,200	4,000	3,900	5,900	1,500	1,000	1,200	2/	1,200
Pastel	5,400	6,300	1,900	2,300	1,600	730	1,000	360	590	470
Pearl	2,500	2,300	2,800	2/	3,500	700	700	880	830	880
Others	3,600	2,400	2,700	4,900	2,400	970	540	760	2,220	740
TOTAL	18,000	17,400	13,100	12,500	15,600	5,200	3,900	3,700	4,200	4,000

1/ Estimates not available for 1981 production and 1982 Females bred to produce Kits.
2/ Included in others to avoid disclosing individual operations.

DAIRY HIGHLIGHTS

PRODUCTION AND MARKETINGS

Milk production during 1984 in Massachusetts totaled 575 million pounds. The milk was produced from an average of 47,000 milk cows at a rate of 12,234 pounds per cow. Both the average number of cows and rate per cow were below the 1983 levels.

Farmers during the year marketed 565 million pounds of milk, 38 million pounds less than during 1983, and the lowest amount since 1980. Farmers received an average price of $14.85 per cwt., 22 cents below the 1983 average. Total cash receipts from milk markets totaled $83.9 million, $6.9 million less than the record high receipts set in 1983.

MANUFACTURED DAIRY PRODUCTS

The 1984 production of manufactured dairy products in the Commonwealth was below 1983 levels in all commodities except for ice cream. Ice cream production totaled 46.9 million gallons, 5 percent more than the 1983 production. There were 7.80 million gallons of ice milk produced in 1984, down 15 percent from the previous year. Milk sherbet production totaled 2.16 million gallons, 6 percent less than in 1983.

A total of 11.7 million pounds of cheese was produced during 1984, down 8 percent from the 1983 production of 12.6 million pounds.

MILK COWS: AVERAGE NUMBER ON FARMS, BY QUARTERS AND ANNUAL, MASSACHUSETTS, 1974-1984

YEAR	JAN - MAR	APR - JUN	JUL - SEP	OCT - DEC	ANNUAL
			1,000 Head		
1974	54	54	54	54	54
1975	55	54	54	55	55
1976	55	54	53	53	54
1977	52	51	51	51	51
1978	50	48	48	49	49
1979	49	48	47	46	48
1980	46	46	46	46	46
1981	45	46	47	47	46
1982	47	47	46	47	47
1983	49	49	46	48	48
1984	47	47	47	47	47

MILK PRODUCTION: AVERAGE PER COW, BY QUARTERS AND ANNUAL, MASSACHUSETTS, 1974-1984

YEAR	JAN - MAR	APR - JUN	JUL - SEP	OCT - DEC	ANNUAL
			Pounds		
1974	2,705	2,945	2,720	2,610	10,981
1975	2,725	2,960	2,720	2,620	10,927
1976	2,735	2,950	2,760	2,700	11,074
1977	2,850	3,060	2,890	2,870	11,706
1978	2,900	3,110	2,920	2,820	11,673
1979	2,920	3,090	2,940	2,980	11,792
1980	3,110	3,240	3,000	3,050	12,391
1981	3,180	3,295	3,020	3,000	12,565
1982	3,190	3,320	3,180	3,185	12,809
1983	3,190	3,245	3,200	3,150	12,771
1984	3,220	3,085	2,900	3,040	12,234

MILK PRODUCTION, BY QUARTERS AND ANNUAL, MASSACHUSETTS, 1974-1984

YEAR	JAN - MAR	APR - JUN	JUL - SEP	OCT - DEC	ANNUAL
			Million Pounds		
1974	146	159	147	141	593
1975	150	160	147	144	601
1976	150	159	146	143	598
1977	148	156	147	146	597
1978	145	149	140	138	572
1979	143	148	138	137	566
1980	143	149	138	140	570
1981	143	152	142	141	578
1982	150	156	146	150	602
1983	156	159	147	151	613
1984	151	145	136	143	575

MILK: QUANTITY MARKETED, PRICE AND CASH RECEIPTS, MASSACHUSETTS, 1974-1984

YEAR	SOLD TO PLANTS			SOLD DIRECTLY TO CONSUMERS			COMBINED MARKETINGS		
	QUANTITY	PRICE PER CWT.	CASH RECEIPTS	QUANTITY	PRICE PER QUART	CASH RECEIPTS	QUANTITY	PRICE PER CWT.	CASH RECEIPTS
	Million Pounds	Dollars	1,000 Dollars	Million Quarts	Cents	1,000 Dollars	Million Pounds	Dollars	1,000 Dollars
1974	550	9.50	52,250	14.4	40	5,768	581	9.99	58,018
1975	555	9.65	53,588	15.8	40	6,326	589	10.17	59,884
1976	550	10.70	58,850	16.7	42	7,032	586	11.24	65,882
1977	550	10.70	58,850	16.7	42	7,032	586	11.24	65,882
1978	530	11.50	60,950	14.9	43	6,400	562	11.98	67,350
1979	525	12.80	67,200	14.4	46	6,633	556	13.28	73,833
1980	530	13.70	72,610	14.0	51	7,116	560	14.24	79,726
1981	540	14.60	78,840	13.5	53	7,149	569	15.11	85,989
1982	565	14.50	81,925	13.5	53	7,149	594	15.00	89,074
1983	575	14.60	83,950	13.0	53	6,902	603	15.07	90,852
1984	540	14.40	77,760	11.6	53	6,163	565	14.85	83,923

MILK: QUANTITIES USED AND MARKETED BY FARMERS, MASSACHUSETTS, 1974-1984

YEAR	TOTAL PRODUCED	MILK, USED ON FARMS WHERE PRODUCED			MILK MARKETED BY FARMERS		
		USED FOR MILK, CREAM AND BUTTER	FED TO CALVES	TOTAL	SOLD TO PLANTS AND DEALERS	SOLD DIRECTLY TO CONSUMERS	TOTAL
	Million Pounds						
1974	593	7	5	12	550	31	581
1975	601	7	5	12	555	34	589
1976	598	7	5	12	550	36	586
1977	597	6	5	11	550	36	586
1978	572	5	5	10	530	32	562
1979	566	4	6	10	525	31	556
1980	570	4	6	10	530	30	560
1981	578	4	5	9	540	29	569
1982	602	3	5	8	565	29	594
1983	613	2	8	10	575	28	603
1984	575	2	8	10	540	25	565

MILK SOLD TO PLANTS: MONTHLY AND ANNUAL AVERAGE PRICE PER 100 POUNDS RECEIVED BY FARMERS, MASSACHUSETTS, 1974-1984

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
	Dollars												
1974	9.80	9.90	9.85	9.80	9.25	8.50	8.90	9.40	9.70	9.80	10.00	9.45	9.50
1975	9.55	9.50	9.15	8.95	8.50	8.35	9.05	9.65	10.30	10.80	11.10	11.20	9.65
1976	11.10	10.80	10.70	10.00	9.90	9.75	10.40	11.00	11.30	11.50	11.20	10.70	10.70
1977	10.60	10.50	10.20	10.20	9.90	10.00	10.50	10.90	11.20	11.40	11.40	11.20	10.70
1978	11.10	11.20	11.00	10.70	10.70	10.60	11.00	11.60	12.10	12.70	12.90	12.70	11.50
1979	12.70	12.80	12.50	12.20	12.00	12.00	12.50	13.10	13.40	13.80	13.90	13.40	12.80
1980	13.60	13.40	13.30	13.00	13.00	12.80	13.30	13.70	14.20	14.70	14.80	14.70	13.70
1981	14.90	14.70	14.50	14.30	14.00	13.80	14.30	14.60	14.90	15.20	15.00	14.80	14.60
1982	14.90	14.70	14.50	14.20	13.80	13.70	14.20	14.60	14.90	15.00	15.10	14.80	14.50
1983	14.80	14.80	14.40	14.30	13.90	13.80	14.20	14.70	14.90	15.10	15.20	14.60	14.60
1984	14.60	14.30	14.10	13.90	13.80	13.60	14.00	14.50	14.90	15.30	15.40	14.90	14.40

MILK: PRODUCTION AND VALUE, MASSACHUSETTS, 1974-1984

YEAR	AVERAGE NUMBER OF MILK COWS	PRODUCTION					
		PER MILK COW		PERCENTAGE OF FAT IN ALL MILK PRODUCED	TOTAL		VALUE OF MILK PRODUCED
		MILK	MILKFAT		MILK	MILKFAT	
	1,000	Pounds		Percent	Million Pounds		1,000 Dollars
1974	54	10,981	402	3.66	593	22	59,241
1975	55	10,927	397	3.63	601	22	61,122
1976	54	11,074	405	3.66	598	22	67,215
1977	51	11,706	431	3.68	597	22	67,103
1978	49	11,673	428	3.67	572	21	68,526
1979	48	11,792	429	3.64	566	21	75,160
1980	46	12,391	447	3.61	570	21	81,150
1981	46	12,565	456	3.63	578	21	87,349
1982	47	12,809	466	3.64	602	22	90,273
1983	48	12,771	469	3.67	613	23	92,359
1984	47	12,234	456	3.73	575	21	85,408

MANUFACTURED DAIRY: PRODUCTION MAJOR PRODUCTS, MASSACHUSETTS, 1974-1984

YEAR	TOTAL CHEESE 1/	ICE CREAM	ICE MILK	MILK SHERBET
	1,000 Pounds	1,000 Gallons		
1974	5,412	43,607	9,611	2,186
1975	5,288	47,761	9,177	1,985
1976	6,123	46,320	7,246	2,116
1977	5,786	45,255	7,483	2,180
1978	7,780	42,909	9,779	2,102
1979	6,255	42,463	10,454	1,829
1980	5,099	43,986	9,817	1,992
1981	8,559	43,193	10,173	2,089
1982	9,110	44,444	6,574	2,198
1983	12,643	44,510	9,138	2,297
1984	11,689	46,862	7,802	2,155

1/ Excluding cottage cheese.

POULTRY HIGHLIGHTS

EGGS

Massachusetts laying flocks during 1984 produced 268 million eggs, 3 million more than the previous year. The average daily rate of lay per 100 birds was a record 69.1 eggs, surpassing the previous high rate of 68.5 eggs set in 1983. Poultrymen received a record high $1.09 per dozen for eggs in 1984, 18 cents above the previous high 91 cents per dozen the previous year. Gross income from egg production in 1984 was $24.3 million, 21 percent more than the gross in 1983.

CHICKENS

The December 1, 1984 inventory of chickens on farms (excluding broilers) totaled 1.5 million birds, 10 percent above a year ago but 20,000 birds less than in December 1982. A breakdown of the December 1 inventory indicates that the increase in hens was more than offset by the decrease in pullets of laying age. In the younger birds, the increase in all other categories more than offset the small decline in hens and pullets of laying age. Total value of all chickens on hand December 1, 1984 was $4.0 million, 17 percent more than a year earlier. Poultrymen marketed 3.9 million pounds of poultry during 1984 at 16.5 cents per pound.

TURKEYS

Massachusetts turkey production, at 152,000 birds during 1984, was 8,000 less than a year earlier but 5 percent more than the number raised in 1982. There were 3.3 million pounds live weight from the turkeys raised. The price per pound, at 83 cents, was 1 cent lower than received in 1983.

POULTRY: INVENTORY BY CLASS AND VALUE, MASSACHUSETTS, DECEMBER 1, 1973-1984

YEAR	CHICKENS, EXCLUDING BROILERS						VALUE PER HEAD	TOTAL VALUE
	HENS AND PULLETS OF LAYING AGE		PULLETS NOT OF LAYING AGE		OTHER	TOTAL		
	HENS	PULLETS	3 MONTHS AND OLDER	UNDER 3 MONTHS				
	1,000						Dollars	1,000 Dollars
1973	896	807	251	255	31	2,240	2.00	4,480
1974	772	939	224	271	31	2,237	2.10	4,698
1975	725	786	293	268	19	2,091	2.35	4,914
1976	593	782	259	241	15	1,870	2.40	4,488
1977	465	1,005	290	180	50	1,990	2.05	4,080
1978	550	620	196	174	40	1,580	2.05	3,239
1979	617	755	126	197	31	1,726	2.15	3,711
1980	644	811	108	209	18	1,790	2.30	4,117
1981	650	622	141	153	37	1,603	2.55	4,088
1982	742	458	156	166	18	1,540	2.55	3,927
1983	595	514	110	138	21	1,378	2.45	3,376
1984	651	450	160	225	34	1,520	2.60	3,952

POULTRY: AVERAGE NUMBER OF LAYERS BY MONTHS AND ANNUAL, MASSACHUSETTS, 1974 - 1984

MONTH	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
						1,000					
DEC 1/	1,717	1,751	1,504	1,434	1,447	1,253	1,342	1,412	1,299	1,195	1,069
JAN	1,676	1,742	1,496	1,501	1,402	1,338	1,320	1,362	1,357	1,185	1,077
FEB	1,602	1,715	1,474	1,515	1,440	1,400	1,331	1,322	1,378	1,086	1,122
MAR	1,565	1,743	1,429	1,509	1,500	1,480	1,339	1,326	1,354	1,028	1,100
APR	1,536	1,718	1,401	1,514	1 503	1,435	1,332	1,334	1,340	1,032	1,086
MAY	1,530	1,668	1,408	1,539	1,484	1,385	1,318	1,293	1,326	1,047	1,063
JUN	1,533	1,637	1,428	1,519	1,392	1,395	1,300	1,220	1,278	1,037	1,038
JUL	1,550	1,662	1,415	1,521	1,340	1,421	1,309	1,195	1,272	1,025	1,037
AUG	1,591	1,679	1,400	1,515	1,388	1,416	1,355	1,211	1,266	1,019	1,018
SEP	1,633	1,614	1,399	1,435	1,395	1,365	1,383	1,272	1,245	1,015	1,012
OCT	1,676	1,566	1,406	1,401	1,383	1,373	1,387	1,368	1,230	1,011	1,025
NOV	1,705	1,537	1,398	1,440	1,280	1,384	1,420	1,330	1,215	1,064	1,066
ANNUAL	1,610	1,669	1,430	1,487	1,413	1,387	1,345	1,303	1,297	1,062	1,059

EGGS: DAILY RATE OF LAY BY MONTHS AND ANNUAL, MASSACHUSETTS, 1974 - 1984

MONTH	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
						Percent					
DEC 1/	65.4	64.0	65.5	65.3	63.1	67.0	67.3	66.3	69.5	64.8	72.4
JAN	64.7	64.5	65.0	65.2	64.5	67.1	66.0	63.9	66.5	68.1	68.9
FEB	64.1	64.1	64.5	63.9	66.0	67.6	67.3	64.8	64.8	69.1	64.6
MAR	64.2	64.6	65.8	64.4	65.0	67.9	67.5	68.1	65.2	65.9	73.3
APR	64.4	67.0	67.8	65.5	65.7	67.1	67.6	67.5	66.8	67.8	70.6
MAY	65.2	68.0	68.3	66.9	67.2	64.9	66.1	70.0	67.6	67.3	66.8
JUN	65.4	67.5	67.3	69.3	67.9	64.7	66.7	71.0	67.7	67.5	70.6
JUL	65.0	66.3	66.0	66.0	67.4	66.4	66.5	67.5	67.0	69.2	71.5
AUG	63.6	66.0	64.0	63.4	66.2	66.7	61.9	69.3	66.2	69.6	69.7
SEP	61.7	65.8	62.3	64.4	66.3	67.3	62.7	68.1	64.8	69.0	69.2
OCT	62.0	65.8	63.5	65.1	66.8	67.0	67.5	66.0	65.1	67.0	66.1
NOV	63.5	66.3	65.3	64.7	66.8	67.9	68.1	67.7	65.4	72.0	65.7
ANNUAL	64.0	66.0	65.5	65.4	66.1	67.0	66.1	67.4	66.3	68.5	69.1

EGGS: TOTAL PRODUCTION BY MONTHS AND ANNUAL, MASSACHUSETTS, 1974 - 1984

MONTH	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
						Million					
DEC 1/	35	35	31	29	28	26	28	29	28	24	24
JAN	34	35	30	30	28	28	27	27	28	25	23
FEB	29	31	28	27	27	27	26	24	25	21	21
MAR	31	35	29	30	30	31	28	28	27	21	25
APR	30	35	28	30	30	29	27	27	27	21	23
MAY	31	35	30	32	31	28	27	28	28	23	22
JUN	30	33	29	32	28	27	26	26	26	21	22
JUL	31	34	29	31	28	29	27	25	26	22	23
AUG	31	34	28	30	28	29	26	26	26	22	22
SEP	30	32	26	28	28	28	26	26	24	21	21
OCT	32	32	28	28	29	29	29	28	25	21	21
NOV	32	31	27	28	26	28	29	27	24	23	21
ANNUAL	376	402	343	355	341	339	326	321	314	265	268

1/ Previous year

CHICKENS: PRODUCTION, DISPOSITION AND INCOME, MASSACHUSETTS, 1974-1984

YEAR	NUMBER OF BIRDS			LIVEWEIGHT			PRICE PER POUND	GROSS INCOME
	PRODUCED	CONSUMED	SOLD	PRODUCED	CONSUMED	SOLD		
	1,000			1,000 Pounds			Cents	1,000 Dollars
1974	1,706	12	1,697	10,037	55	10,012	10.3	1,037
1975	1,371	11	1,506	7,111	51	7,982	10.3	827
1976	1,090	11	1,300	6,186	51	7,150	13.3	958
1977	1,331	11	1,200	7,475	51	6,600	11.3	752
1978	901	11	1,300	5,134	51	7,150	12.3	885
1979	1,057	11	900	5,835	51	4,950	13.2	660
1980	1,225	11	1,150	6,708	51	6,325	8.3	529
1981	1,474	11	1,650	8,266	51	9,075	9.0	822
1982	828	11	880	4,457	51	4,840	8.0	391
1983	838	11	989	4,793	51	5,440	10.5	576
1984	861	11	708	4,304	51	3,894	16.5	651

EGGS: PRODUCTION AND VALUE, MASSACHUSETTS, 1974-1984

YEAR	EGGS PRODUCED	EGGS SOLD	PRICE PER DOZEN	CASH RECEIPTS	VALUE OF PRODUCTION
	Million		Cents	1,000 Dollars	
1974	376	375	64.5	20,156	20,210
1975	402	401	66.2	22,122	22,177
1976	343	342	72.1	20,549	20,609
1977	355	354	69.9	20,621	20,679
1978	341	340	66.2	18,757	18,812
1979	339	338	73.8	20,787	20,849
1980	326	325	74.5	20,177	20,239
1981	321	320	86.0	22,933	23,005
1982	314	313	84.0	21,910	21,980
1983	265	264	91.0	20,020	20,096
1984	268	267	109.0	24,253	24,344

TURKEYS: PRODUCTION AND VALUE, MASSACHUSETTS, 1974-1984

YEAR	TURKEYS RAISED		NUMBER PRODUCED	POUNDS PRODUCED	PRICE PER POUND	VALUE OF PRODUCTION
	HEAVY	LIGHT				
	1,000			1,000 Pounds	Cents	1,000 Dollars
1974	139	33	172	3,268	57	1,863
1975	106	19	125	2,375	58	1,378
1976	122	21	143	2,860	58	1,659
1977	110	15	125	2,600	58	1,508
1978	128	18	146	2,993	68	2,035
1979	133	/	140	2,800	65	1,820
1980	126	-	126	2,470	78	1,926
1981	145	-	145	3,045	77	2,345
1982	145	-	145	3,089	77	2,378
1983	160	-	160	3,312	84	2,782
1984	152	-	152	3,314	83	2,750

HATCH: BROILER-TYPE CHICKS BY COMMERCIAL HATCHERIES, NEW ENGLAND, 1977 - 1984

MONTH	1977	1978	1979	1980	1981	1982	1983	1984
				1,000				
JANUARY	8,430	8,370	8,742	6,691	6,770	2,712	2,043	2,668
FEBRUARY	7,833	7,644	8,103	6,617	5,665	2,548	2,699	2,707
MARCH	9,107	8,961	9,093	7,535	6,391	2,876	2,721	2,604
APRIL	8,804	9,218	9,192	7,252	4,645	3,115	2,890	2,686
MAY	9,481	9,383	9,424	7,545	3,294	3,047	2,841	2,491
JUNE	8,828	8,855	9,216	7,524	3,129	2,910	2,528	2,690
JULY	9,024	9,033	9,216	7,495	3,107	2,774	2,440	2,562
AUGUST	8,184	8,661	8,796	7,620	2,888	2,948	2,249	2,669
SEPTEMBER	7,547	8,168	7,385	6,783	2,844	2,980	2,303	2,165
OCTOBER	8,079	7,998	6,903	6,654	2,672	2,687	2,317	2,382
NOVEMBER	7,867	7,835	6,875	6,857	2,401	2,297	2,143	2,175
DECEMBER	8,179	8,196	7,292	6,999	2,391	2,493	2,511	2,226
ANNUAL	101,363	102,322	100,237	85,572	46,197	33,387	29,685	30,025

HATCH: EGG-TYPE CHICKS BY COMMERCIAL HATCHERIES, NEW ENGLAND, 1977 - 1984

MONTH	1977	1978	1979	1980	1981	1982	1983	1984
				1,000				
JANUARY	2,187	1,668	1,860	2,150	1,767	1,102	1,626	1,911
FEBRUARY	1,985	1,684	1,936	1,899	1,837	1,230	1,370	1,828
MARCH	2,215	1,837	2,128	1,990	2,024	1,685	2,008	2,385
APRIL	2,401	2,145	2,470	1,797	2,060	2,015	1,947	2,299
MAY	2,329	2,231	2,440	2,098	1,954	2,221	2,018	1,981
JUNE	2,153	2,347	2,165	1,899	1,970	1,763	2,070	2,269
JULY	1,977	2,131	2,131	1,782	1,676	1,646	1,716	1,891
AUGUST	2,275	1,967	2,270	2,097	1,647	1,368	1,687	1,862
SEPTEMBER	1,854	1,886	1,438	1,714	1,748	1,426	1,894	1,613
OCTOBER	1,873	2,062	1,938	1,934	1,896	1,603	1,669	2,034
NOVEMBER	1,652	1,863	2,071	1,693	1,538	1,512	1,797	1,912
DECEMBER	1,741	1,850	2,233	1,738	1,467	1,740	2,094	1,909
ANNUAL	24,642	23,671	25,080	22,791	21,584	19,311	21,896	23,894

CROP HIGHLIGHTS

CORN SILAGE

Corn silage production during 1984 totaled 620,000 tons, down 6 percent from 1983, and the smallest output on record since 1977. Although corn acreage planted was up nearly 5 percent in 1984, and harvested acreage up 3 percent, poor yields offset any increase in acreage. Heavy spring rains hit in late May, flooding corn acreage in many areas. Growers replanted and refertilized late into June, hoping for a long season. Excellent harvesting conditions prevailed, allowing farmers to chop silage late into the fall; however, yields never fully recovered. Late planted corn suffered from armyworm infestations, lack of maturity at harvest and excessive nutrient leaching. Value of the 1984 silage crop totaled $18.7 million, 6 percent under the 1983 crop.

HAY

Production of all hay on Massachusetts farms during 1984 totaled 300,000 tons, a 4 percent reduction from the previous year. Although hay acreage was up 2 percent, low yields kept production well under 1983 levels. Persistent shower activity at time of first cutting delayed harvest from one to two weeks, forcing growers to put over-mature or rain damaged hay into storage. Warm, humid weather followed, providing less than ideal haying conditions for the remaining cuttings.

Alfalfa and alfalfa mixtures comprised 28 percent of all hay production, totaling 84,000 tons. Other hay production weighed in at 216,000 tons, with an average yield of 2.25 tons per acre.

Despite lower output, improved prices set the value of the 1984 hay crop close to $29 million, slightly above 1983 value.

TOBACCO

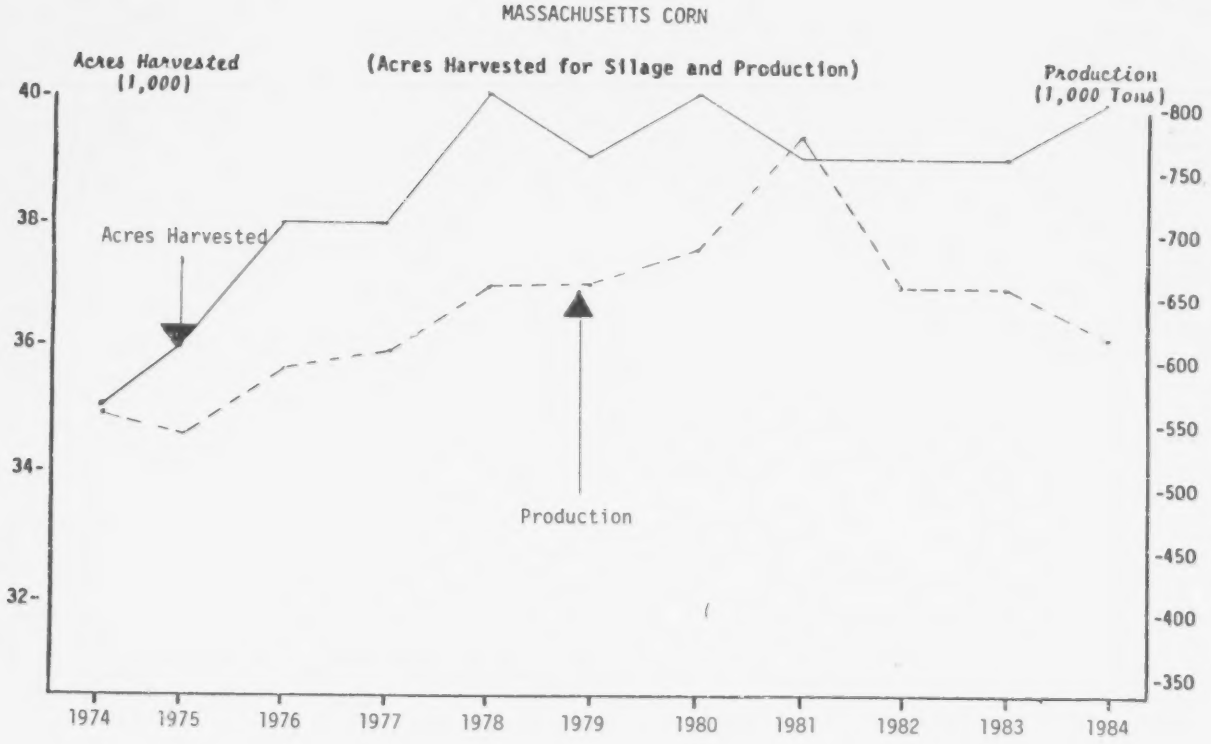
Massachusetts tobacco production totaled 785,000 pounds in 1984, slightly above 1983 output. Crop value totaled $6.6 million, almost double the value of the 1983 crop due to the larger percentage of higher priced shade type marketed.

Havana Seed growers harvested 150 acres in 1984, the smallest outdoor acreage on record in the Commonwealth. The substantial reduction in acreage from 1983 was largely due to a defeated grower referendum, which eliminated a guaranteed market for the crop. Favorable growing conditions and excellent curing weather contributed to high yields in 1984 with growers averaging 1,965 pounds per acre.

Increased harvested shade tobacco acreage in 1984 to 350 acres, doubled production from the previous year. Yields averaged 1,400 pounds per acre, 70 pounds under the 1983 yield, but 200 pounds per acre heavier than the 1982 output.

CORN: ACREAGE, PRODUCTION AND VALUE, MASSACHUSETTS, 1974 - 1984

YEAR	ACRES PLANTED FOR ALL PURPOSES	SILAGE			
		ACRES HARVESTED	YIELD PER ACRE	TOTAL PRODUCTION	VALUE OF PRODUCTION
	1,000		Tons	1,000 Tons	1,000 Dollars
1974	38	35	16.0	560	10,080
1975	39	36	15.0	540	11,475
1976	43	38	15.5	589	12,987
1977	44	38	16.0	608	13,923
1978	45	40	16.5	660	14,850
1979	44	39	17.0	663	16,575
1980	45	40	17.0	680	19,380
1981	46	39	20.0	780	19,968
1982	46	39	17.0	663	18,763
1983	43	39	17.0	663	19,956
1984	45	40	15.5	620	18,724



ALFALFA HAY: ACREAGE AND PRODUCTION, MASSACHUSETTS, 1974 - 1984

YEAR	ACRES HARVESTED	YIELD PER ACRE	PRODUCTION
		Tons	
1974	25,000	2.55	64,000
1975	26,000	2.60	68,000
1976	26,000	2.45	64,000
1977	28,000	2.30	64,000
1978	28,000	2.60	73,000
1979	27,000	2.90	78,000
1980	27,000	2.40	65,000
1981	28,000	2.80	78,000
1982	29,000	2.80	81,000
1983	29,000	3.00	87,000
1984	30,000	2.80	84,000

ALL OTHER HAY: ACREAGE AND PRODUCTION, MASSACHUSETTS, 1974 - 1984

YEAR	ACRES HARVESTED	YIELD PER ACRE	PRODUCTION
		Tons	
1974	90,000	2.00	180,000
1975	92,000	2.05	189,000
1976	94,000	2.00	188,000
1977	92,000	1.90	175,000
1978	92,000	2.15	198,000
1979	92,000	2.25	207,000
1980	88,000	2.10	185,000
1981	90,000	2.15	194,000
1982	90,000	2.25	203,000
1983	94,000	2.40	226,000
1984	96,000	2.25	216,000

ALL HAY: ACREAGE, PRODUCTION AND VALUE, MASSACHUSETTS, 1974 - 1984

YEAR	ACRES HARVESTED	YIELD PER ACRE	PRODUCTION	PRICE PER TON	VALUE OF PRODUCTION
		Tons		Dollars	1,000 Dollars
1974	115,000	2.12	244,000	63.00	15,372
1975	118,000	2.18	257,000	79.00	20,303
1976	120,000	2.10	252,000	71.00	17,892
1977	120,000	1.99	239,000	69.00	16,491
1978	120,000	2.26	271,000	73.00	19,783
1979	119,000	2.39	285,000	72.00	20,520
1980	115,000	2.17	250,000	76.00	19,000
1981	118,000	2.31	272,000	80.00	21,760
1982	119,000	2.39	284,000	89.00	25,276
1983	123,000	2.54	313,000	92.00	28,796
1984	126,000	2.38	300,000	96.50	28,950

TOBACCO, SHADE TYPE: ACREAGE, PRODUCTION AND VALUE, MASSACHUSETTS, 1974-1984

YEAR	ACRES HARVESTED	YIELD PER ACRE	TOTAL PRODUCTION	PRICE PER POUND	VALUE OF PRODUCTION
		Pounds	1,000 Pounds	Dollars	1,000 Dollars
1974	1,300	1,610	2,093	6.00	12,558
1975	1,250	1,335	1,669	6.40	10,682
1976	1,050	1,480	1,554	5.40	8,392
1977	980	1,600	1,568	6.00	9,408
1978	860	1,300	1,118	7.50	8,385
1979	770	1,400	1,078	8.50	9,163
1980	940	1,475	1,387	9.80	13,593
1981	900	1,575	1,418	10.00	14,180
1982	250	1,200	300	12.50	3,750
1983	170	1,470	250	11.00	2,750
1984	350	1,400	490	12.50	6,125

TOBACCO, HAVANA SEED: ACREAGE, PRODUCTION AND VALUE, MASSACHUSETTS, 1974-1984

YEAR	ACRES HARVESTED	YIELD PER ACRE	TOTAL PRODUCTION	PRICE PER POUND	VALUE OF PRODUCTION
		Pounds	1,000 Pounds	Dollars	1,000 Dollars
1974	160	2,040	326	0.82	267
1975	170	1,650	281	0.98	275
1976	160	1,819	291	0.87	253
1977	180	1,880	338	0.98	331
1978	170	2,000	340	1.10	374
1979	220	1,850	407	1.20	488
1980	250	2,000	500	1.31	655
1981	240	2,300	552	1.40	773
1982	300	1,840	552	1.35	745
1983	255	2,090	533	1.40	746
1984	150	1,965	295	1.55	457

FRUIT AND VEGETABLE HIGHLIGHTS

CRANBERRIES:

Cranberry production in Massachusetts surpassed all records in 1984, securing the Commonwealth's place as the number one in the Nation. Growers harvested 1.663 million barrels, exceeding 1983 output by 17 percent, and 29 percent above the 1982 crop. Excellent growing conditions contributed to a record high yield of 148.5 barrels to the acre. Bogs over-wintered well, with plenty of water for frost protection. Heavy bloom, coupled with ideal pollinating conditions, helped produce heavy fruit set. Size of berries generally ranged from medium to large, with insect injury light. Prices during the season averaged $54.40 per barrel in 1984, bringing the total value of the crop to just under $90.5 million.

APPLES:

Apple growers in the Commonwealth produced 2.3 million 42-pound units in 1984, about the same amount as in 1983. Apple producers received $7.82 per unit for 1984 apples, 72 cents more than was received for their 1983 apples. The increase in price, coupled with similar production, produced a total value in excess of $18 million, 10 percent greater than the 1983 value and the highest of record.

PEACHES:

Peach production for 1984 totaled 40,000 48-pound units, 5,000 units above the 1983 production. Although production was greater than the previous year's, a reduced average price ($19.00 per unit) created total value for the 1984 crop of $760,000, down 3 percent from the 1983 value.

POTATOES:

Potato growers in Massachusetts had a very poor year. Spring floods destroyed many potato fields, forcing replanting of some and abandoning others. Area harvested in 1984 totaled only 2,900 acres, 15 percent below the 1983 level and the fewest of record. Although the average yield of 200 cwt. per acre was 10 cwt. more than in 1983, total production of 580,000 cwt. was 60,000 cwt. below the previous record low production set in 1972 and 1973. Value of the 1984 crop was $3.1 million, 33 percent below the 1983 crop but 3 percent above the 1982 value.

VEGETABLES:

Vegetable growers produced 713,000 cwt. of sweet corn and 152,000 cwt. of tomatoes for fresh market sales in 1984. Reduced acreage of sweet corn and lower yields dropped total production 11 percent below the 1983 production. Farmers received a better price for their 1984 corn, keeping the total value of production only 3 percent below the 1983 level. More tomato acreage harvested and higher yields raised total production of tomatoes above the poor production of 1983. The higher production more than offset the reduced average price, thus bringing total value of production back over the $4 million mark.

CRANBERRIES: ACREAGE, PRODUCTION, UTILIZATION AND VALUE, MASSACHUSETTS, 1974-1984

YEAR	ACRES	YIELD PER ACRE	PRODUCTION 1/	UTILIZATION			SEASON AVERAGE PRICE PER BARREL 3/	VALUE OF UTILIZED PRODUCTION 4/
				FRESH SALES	PROCESSED	SHRINKAGE 2/		
		Barrels	1,000 Barrels				Dollars	1,000 Dollars
1974	11,200	83.2	932	167	491	274	10.70	9,972
1975	11,200	70.1	785	162	508	115	13.00	10,205
1976	11,200	83.5	935	220	630	85	13.40	12,529
1977	11,200	78.1	875	207	576	92	17.70	15,488
1978	11,200	105.4	1,180	247	833	100	21.60	25,488
1979	11,200	96.4	1,080	130	880	70	26.60	28,728
1980	11,200	105.8	1,185	110	1,016	59	33.50	39,698
1981	11,200	104.6	1,172	205	875	92	41.50	48,639
1982	11,200	114.9	1,287	169	998	120	46.30	59,588
1983	11,200	126.9	1,421	177	1,217	27	51.70	73,466
1984	11,200	148.5	1,663	170	1,442	51	54.40	90,467

1/ Includes cranberries that were put in set aside under the Cranberry Marketing Order.
2/ Berries paid for by processors and lost because of dehydration and berry breakdown after delivery.
3/ Equivalent return at first delivery point, screen basis.
4/ Excludes cranberries that were put in set aside under the Cranberry Marketing Order.

APPLES: PRODUCTION AND VALUE, MASSACHUSETTS, 1974-1984

YEAR	TOTAL PRODUCTION 1/	UTILIZED PRODUCTION	PRICE PER UNIT	VALUE OF UTILIZED PRODUCTION
	1,000 42-Pound Units		Dollars	1,000 Dollars
1974	2,548	2,381	4.33	10,300
1975	2,500	2,333	4.37	10,192
1976	2,262	2,262	6.13	13,870
1977	2,262	2,190	5.38	11,776
1978	2,500	2,500	5.80	14,490
1979	2,262	2,262	6.51	14,725
1980	2,381	2,381	6.11	14,550
1981	1,976	1,976	8.35	16,501
1982	2,381	2,381	7.26	17,290
1983	2,310	2,310	7.10	16,403
1984	2,310	2,310	7.82	18,063

1/ Estimates relate to production in orchards of 100 or more trees.

PEACHES: PRODUCTION AND VALUE, MASSACHUSETTS, 1974-1984

YEAR	PRODUCTION	PRICE PER UNIT	VALUE OF PRODUCTION
	1,000 48-Pound Units	Dollars	1,000 Dollars
1974	35	8.74	306
1975	42	9.52	400
1976	35	12.63	442
1977	42	10.48	440
1978	38	13.74	522
1979	38	15.16	576
1980	42	14.29	600
1981	4	17.50	70
1982	31	21.77	675
1983	35	22.34	782
1984	40	19.00	760

POTATOES: ACREAGE, PRODUCTION AND VALUE, MASSACHUSETTS 1974-1984

YEAR	ACRES HARVESTED	YIELD PER ACRE	TOTAL PRODUCTION	AVERAGE PRICE PER CWT.	VALUE OF PRODUCTION
		Cwt.	1,000 Cwt.	Dollars	1,000 Dollars
1974	4,400	200	880	3.50	3,080
1975	3,900	205	800	5.00	4,000
1976	3,500	220	770	5.80	4,466
1977	3,700	240	888	5.40	4,795
1978	3,600	225	810	6.30	5,103
1979	3,400	220	748	5.60	4,189
1980	3,400	220	748	7.50	5,610
1981	3,300	225	743	5.40	4,012
1982	3,800	205	779	3.90	3,038
1983	3,400	190	646	7.20	4,651
1984	2,900	200	580	5.40	3,132

TOMATOES: ACREAGE, PRODUCTION AND VALUE, MASSACHUSETTS, 1974-1984

YEAR	ACRES HARVESTED	YIELD PER ACRE	TOTAL PRODUCTION	AVERAGE PRICE PER CWT.	VALUE OF PRODUCTION
		Cwt.	1,000 Cwt.	Dollars	1,000 Dollars
1974	700	175	123	16.50	2,030
1975	630	210	132	18.00	2,376
1976	590	195	115	21.40	2,461
1977	560	190	106	20.40	2,162
1978	550	210	116	21.80	2,529
1979	510	190	97	24.60	2,386
1980	680	210	143	21.70	3,103
1981	760	215	163	20.10	3,276
1982	660	220	145	30.00	4,350
1983	570	165	94	30.00	2,820
1984	660	230	152	27.00	4,104

SWEET CORN: ACREAGE, PRODUCTION AND VALUE, MASSACHUSETTS, 1974-1984

YEAR	ACRES HARVESTED	YIELD PER ACRE	TOTAL PRODUCTION	AVERAGE PRICE PER CWT.	VALUE OF PRODUCTION
		Cwt.	1,000 Cwt.	Dollars	1,000 Dollars
1974	8,200	62	508	8.90	4,521
1975	8,600	81	697	7.10	4,949
1976	8,200	72	590	7.71	4,549
1977	7,800	60	468	8.90	4,165
1978	7,200	88	634	7.00	4,438
1979	7,700	84	647	8.99	5,817
1980	8,200	88	722	9.09	6,563
1981	8,800	85	748	11.70	8,752
1982	7,700	88	678	14.00	9,492
1983	8,700	92	800	13.30	10,640
1984	8,100	88	713	14.50	10,339

MAPLE SYRUP

The production of maple syrup during the 1985 season in Massachusetts totaled 24,000 gallons, 8 percent less than the previous season but 33 percent more than the disappointing 1980 season. The decrease in production from previous year was due to a lower yield per tap which more than offset the higher number of taps. The season was reported as being mostly unfavorable, with the temperature being too cool or too warm. The season lasted about 33 days. The average opening date was around February 26, while the average closing date was approximately March 30. The sweetness of the sap was below normal, with a reported average of 50 gallons of sap to make a gallon of syrup. The color of the syrup was mostly medium, with the remainder being more light than dark. The 1985 maple crop averaged around $21.20 per gallon compared to $20.60 per gallon for maple syrup produced in 1984. The value of production for the 1985 season totaled $509,000, down 5 percent from the 1984 crop value. The decrease in value of production was due to lower production more than offsetting the increase in average price.

MAPLE SYRUP: PRODUCTION AND VALUE, MASSACHUSETTS, 1974-1985

YEAR	PRODUCTION	SEASON AVERAGE PRICE PER GALLON	VALUE OF PRODUCTION
	1,000 Gallons	Dollars	1,000 Dollars
1974	25	11.20	280
1975	31	10.70	332
1976	27	12.75	344
1977	27	14.20	383
1978	23	14.10	395
1979	30	15.90	477
1980	18	18.40	331
1981	40	18.70	748
1982	30	20.20	606
1983	20	20.90	418
1984	26	20.60	536
1985	24	21.20	509

MAPLE SYRUP PRICES: BY TYPE OF SALE AND SIZE OF CONTAINER, MASSACHUSETTS, 1974-1984

YEAR	RETAIL					WHOLESALE					ALL SALES EQUIVALENT PER GALLON
	GAL	1/2 GAL	QUART	PINT	1/2 PINT	GAL	1/2 GAL	QUART	PINT	1/2 PINT	
	Dollars										
1974	10.50	5.90	3.55	2.30	1.40	9.00	5.00	3.00	1.85	1.20	11.20
1975	11.10	6.20	3.75	2.50	1.50	10.00	5.45	3.30	2.05	1.15	10.70
1976	11.65	6.45	3.90	2.55	1.50	10.35	5.75	3.35	2.20	1.35	12.75
1977	12.30	6.90	4.05	2.65	1.80	11.20	6.05	3.70	2.40	1.50	14.20
1978	13.10	7.40	4.29	2.81	1.86	11.66	6.59	3.79	2.41	1.49	14.10
1979	14.88	8.37	4.84	3.12	2.13	12.53	7.13	4.09	2.66	1.77	15.90
1980	17.66	9.69	5.88	3.69	2.46	16.25	8.94	4.73	3.07	1.98	18.40
1981	18.69	10.73	6.23	4.07	2.59	16.44	9.39	5.39	3.33	2.01	18.70
1982	19.39	11.31	6.61	4.20	2.68	16.38	9.87	5.41	3.46	2.13	20.20
1983	19.29	11.08	6.56	4.23	2.64	17.09	9.76	5.74	3.42	2.23	20.90
1984	19.40	11.16	6.56	4.28	2.66	16.80	9.54	5.48	3.50	2.25	20.60

COMMERCIAL FERTILIZER: CONSUMPTION BY KIND AND PLANT NUTRIENTS, MASSACHUSETTS, 1975 - 1983

YEAR	KIND OF FERTILIZER				PRIMARY NUTRIENTS		
	MIXED FERTILIZER	PRIMARY NUTRIENT MATERIALS	SECONDARY AND MICRO-NUTRIENTS	TOTAL FERTILIZER	N	AVAILABLE P_2O_5	K_2O
			Tons				
1975	51,814	15,216	36	67,066	7,866	5,588	6,049
1976	55,548	15,335	150	71,033	8,803	5,984	6,779
1977	53,094	14,882	28	68,004	9,015	5,872	6,607
1978	71,471	14,970	62	86,503	11,501	7,644	8,552
1979	58,397	11,393	224	70,014	10,275	6,220	7,530
1980	50,417	15,207	117	65,741	9,081	5,444	6,375
1981	59,793	10,864	466	71,123	9,352	7,457	6,893
1982	47,171	15,239	689	63,099	8,550	5,122	6,688
1983	37,194	14,342	312	51,848	7,692	3,986	5,226

PRICES PAID BY FARMERS: INDEX NUMBERS, ANNUAL AVERAGE, UNITED STATES, 1974 - 1984, BY YEARS (1977=100)

YEAR	COMMODITIES & SERVICES, INTEREST, TAXES & WAGE RATES	PRODUCTION ITEMS INTEREST, TAXES & WAGE RATES	PRODUCTION ITEMS	INTEREST PAYABLE PER ACRE	TAXES PAYABLE PER ACRE	WAGE RATES FOR HIRED FARM LABOR 1/
1974	81	81	83	65	81	79
1975	89	89	91	77	87	85
1976	95	95	97	88	94	93
1977	100	100	100	100	100	100
1978	108	109	108	117	100	107
1979	123	125	125	143	107	117
1980	138	139	138	174	115	126
1981	150	151	148	211	123	137
1982	157	155	150	241	124	144
1983	160	159	153	250	129	148
1984	164	161	155	251	132	150

1/ Simple average of quarterly indexes seasonally adjusted.

INDEX NUMBERS OF PRICES RECEIVED BY FARMERS, BY COMMODITY GROUPS, U.S. ANNUAL AVE., 1974 - 1984 (1977=100)

YEAR	CROPS								LIVESTOCK & PRODUCTS				ALL FARM PRODUCTS
	FOOD GRAINS	FEED GRAINS AND HAY	TOBACCO	COTTON	OIL BEARING CROPS	FRUIT	COMMERCIAL VEGETABLES	ALL CROPS	DAIRY PRODUCTS	POULTRY & EGGS	MEAT ANIMALS	ALL LIVESTOCK	
1974	192	134	85	85	96	86	81	117	86	94	98	94	105
1975	155	127	93	68	81	85	92	105	90	103	100	98	101
1976	129	120	93	99	85	80	91	102	100	102	101	101	102
1977	100	100	100	100	100	100	100	100	100	100	100	100	100
1978	122	101	109	91	93	137	105	105	109	106	134	124	115
1979	147	114	118	96	103	144	110	116	124	111	166	147	132
1980	165	132	125	114	102	124	113	125	135	112	156	144	134
1981	166	141	140	111	110	130	136	134	142	116	150	143	139
1982	146	120	153	92	88	175	126	121	140	110	155	145	133
1983	148	143	155	104	102	122	130	127	140	113	147	141	134
1984	143	146	153	108	109	197	135	138	139	135	151	146	142

FEED PRICES: AVERAGE PRICE PAID, BY MONTH, MASSACHUSETTS, 1980 - 1984

KIND AND YEAR		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
						Dollars Per Ton							
Laying Feed	1980	162	162	160	160	165	165	174	184	195	195	205	200
	1981	205	200	195	195	195	195	190	188	178	178	174	174
	1982	175	174	170	170	172	173	173	171	167	159	160	164
	1983	165	167	170	176	180	179	182	190	195	195	195	192
	1984	187	181	178	181	185	185	183	180	179	173	171	170
Dairy Feed													
16% protein	1980	165	160	160	160	160	160	164	175	185	185	195	195
	1981	200	200	190	195	200	195	190	185	177	180	180	180
	1982	180	178	175	178	172	177	176	176	170	155	170	171
	1983	172	169	169	172	175	173	173	180	189	192	205	200
	1984	197	185	182	183	185	185	175	168	166	164	163	163
18% protein	1980	175	170	170	165	165	165	170	175	190	200	210	210
	1981	215	215	205	210	215	210	210	200	196	200	197	197
	1982	197	195	193	196	180	191	185	187	183	163	180	182
	1983	183	180	181	182	185	181	181	186	196	200	205	205
	1984	200	190	185	185	190	188	175	170	169	167	166	165
20% protein	1980	177	175	175	170	170	170	173	185	200	205	215	215
	1981	220	220	210	215	220	215	210	205	200	200	200	200
	1982	200	200	195	197	179	194	190	190	187	167	184	183
	1983	185	184	185	185	188	184	184	191	200	205	210	210
	1984	200	195	186	186	190	188	179	178	176	173	172	171
						Dollars Per Cwt.							
Bran	1980	9.80	9.90	10.00	10.50	10.00	10.50	10.50	10.50	11.00	11.50	11.50	11.50
	1981	11.50	11.00	10.00	10.00	10.50	10.50	10.50	10.00	9.50	9.30	9.70	9.80
	1982	10.50	10.00	9.50	9.80	11.00	9.70	9.30	9.10	9.00	9.70	9.10	9.20
	1983	9.50	9.60	9.60	10.00	10.50	10.50	10.50	10.50	11.00	12.00	13.00	12.50
	1984	12.50	12.50	12.50	12.50	12.00	11.50	11.00	10.50	11.00	11.00	11.00	11.00
Middlings	1980	9.20	8.70	9.00	9.50	9.50	9.40	9.20	9.70	10.50	11.00	11.00	11.00
	1981	11.00	10.50	9.50	10.00	10.50	10.00	9.50	9.00	9.00	9.20	9.50	9.80
	1982	9.80	9.60	9.50	9.80	11.00	9.90	9.50	9.40	9.10	9.80	9.20	9.40
	1983	9.60	10.00	9.40	9.80	10.00	9.70	9.70	10.00	10.50	11.00	12.00	12.00
	1984	12.00	12.00	12.50	12.50	12.00	11.50	11.00	11.00	11.00	11.00	11.00	11.00
Cornmeal	1980	8.80	8.70	9.00	9.20	9.00	9.10	9.50	10.00	10.50	10.50	10.50	10.50
	1981	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	10.50	10.00	9.70	9.70
	1982	9.60	9.70	9.80	9.90	10.00	10.00	10.50	10.50	10.50	9.70	9.80	9.80
	1983	9.70	9.80	10.00	10.00	10.50	10.50	10.50	11.00	11.00	11.00	11.00	11.00
	1984	11.00	11.50	11.00	11.50	11.00	11.00	11.00	11.00	11.00	10.50	10.00	9.80
Soybean Meal	1980	15.00	14.50	14.50	14.50	14.00	14.00	14.50	15.50	17.00	18.00	19.00	18.50
	1981	18.00	17.50	17.50	18.00	18.00	17.50	17.00	17.00	16.50	16.00	16.00	16.00
	1982	16.00	16.50	16.50	16.50	17.00	16.00	16.00	15.50	15.50	15.00	15.50	15.50
	1983	15.50	15.50	15.50	16.00	16.00	16.00	16.00	17.00	17.50	17.00	17.50	17.50
	1984	16.50	16.50	16.00	16.00	16.00	14.00	13.00	12.00	11.50	11.00	11.50	11.50
Molasses	1980	7.20	8.00	8.00	8.30	8.00	8.00	8.00	8.80	9.70	9.70	10.00	9.50
	1981	10.00	10.00	10.00	9.80	9.50	9.00	9.00	9.00	9.00	8.70	8.30	8.10
	1982	8.10	8.10	8.10	7.80	8.60	8.00	8.70	8.10	8.10	8.30	8.00	7.70
	1983	7.80	7.80	7.80	7.80	7.90	7.80	7.80	7.80	7.80	7.80	7.90	8.00
	1984	8.00	8.00	7.90	7.90	8.10	8.20	8.20	8.30	7.50	7.50	7.50	7.70
Stock Salt	1980	6.10	6.00	6.50	7.00	7.50	7.50	8.20	8.20	8.50	8.70	8.60	7.80
	1981	8.00	7.70	7.70	7.70	7.90	8.00	8.00	8.50	8.50	8.00	8.40	8.10
	1982	8.50	8.00	8.00	8.00	9.00	7.90	8.50	8.70	8.60	9.40	8.90	9.00
	1983	9.00	9.30	9.40	9.40	9.50	9.50	9.40	10.00	10.00	10.00	10.00	9.70
	1984	9.90	10.00	9.50	9.50	9.20	9.10	9.30	9.50	9.00	9.20	8.70	8.60

FARM PRODUCTION EXPENDITURES, NORTHEAST 1/ AND UNITED STATES, 1984

EXPENDITURE 2/	NORTHEAST		UNITED STATES	
	AVERAGE PER FARM 3/	TOTAL EXPENDITURE 4/	AVERAGE PER FARM 3/	TOTAL EXPENDITURE 4/
	Dollars	1,000 Dollars	Dollars	1,000 Dollars
TOTAL FARM PRODUCTION EXPENDITURES	54,767	9,132,315	55,145	128,348,151
LIVESTOCK & POULTRY:	7,265	1,211,518	6,244	14,531,901
Cattle Purchased	2,386	397,786	3,760	8,751,744
Hogs & Pigs Purchased	106	17,748	342	796,649
Sheep & Lambs Purchased	3	458	70	162,354
Poultry Purchased	1,294	215,716	497	1,155,823
Other Livestock & Poultry Purchased	149	24,902	89	207,661
Other 5/	3,328	554,907	1,486	3,457,670
FARM SERVICES:	6,613	1,102,797	10,143	23,607,842
Custom Hire	445	74,209	857	1,994,726
Insurance	1,354	225,856	1,078	2,510,063
Transportation Expenses	1,177	196,315	529	1,231,558
Marketing Expenses (Crop & Livestock)	967	161,196	947	2,205,090
Miscellaneous Farm Business	1,083	180,589	972	2,263,311
Rent	1,482	247,158	5,549	12,915,613
Cash Rent	1,251	208,589	2,427	5,648,864
Share Rent	231	38,569	3,122	7,266,749
Equipment Leasing 6/	105	17,476	209	487,480
FEED:	9,460	1,577,391	7,869	18,313,611
Grains	2,354	392,569	2,361	5,496,220
Hays & Forages	667	111,232	837	1,947,069
Mixed or Formula Feeds	6,074	1,012,722	4,148	9,653,649
Other Feeds, Additives & Ingredients	317	52,889	450	1,048,366
Pasture & Grazing Livestock	48	7,928	72	168,306
WAGES & CONTRACT LABOR:	6,479	1,080,356	4,499	10,472,332
Cash Wages	5,597	933,323	3,659	8,515,361
Contract Labor	187	31,147	374	870,958
Total Perquisites Furnished	695	115,886	467	1,086,013
INTEREST:	3,752	625,574	5,789	13,473,888
Farm Real Estate 7/	2,588	431,615	3,280	7,633,324
Operating Loans 8/	1,163	193,959	2,509	5,840,563
FERTILIZER, LIME & SOIL CONDITIONERS: 9/	3,178	529,996	3,788	8,816,837
Custom Applied Fertilizer	619	103,225	1,430	3,329,023
Not Custom Applied Fertilizer	2,187	364,658	2,209	5,142,094
Lime & Soil Conditioners	372	62,112	149	345,720
Landlord Fert, Lime & Soil Conditioners	50	8,280	292	680,229
FUELS & ENERGY:	3,607	601,485	3,965	9,227,275
Gasoline - Delivered Bulk to Farm	801	133,589	743	1,728,903
Gasoline - Purchased at Service Station	243	40,581	289	671,617
Diesel Fuel	907	151,246	1,313	3,055,670
L. P. Gas	149	24,846	309	719,428
Natural Gas	64	10,604	143	332,012
Motor Oil, Grease & Special Fluids	133	22,102	166	385,291
Electricity (Excluding Irrigation)	1,023	170,628	706	1,643,792
Electricity for Irrigation	10	1,623	252	587,307

See Footnotes, Page 27

FARM PRODUCTION EXPENDITURES, NORTHEAST 1/ AND UNITED STATES, 1984

EXPENDITURE 2/	NORTHEAST		UNITED STATES	
	AVERAGE PER FARM 3/	TOTAL EXPENDITURE 4/	AVERAGE PER FARM 3/	TOTAL EXPENDITURE 4/
	Dollars	1,000 Dollars	Dollars	1,000 Dollars
FARM & MOTOR SUPPLIES:	2,953	492,405	2,646	6,159,236
Motor Supplies (Tires, Tubes, & Etc.)	1,756	292,768	1,911	4,448,833
Miscellaneous Farm Supplies	597	99,497	488	1,135,217
Marketing Containers	601	100,140	247	575,186
BUILDING, FENCING & FARM IMPROVEMENTS:	3,581	597,092	1,877	4,368,474
New Building Construction & Remodeling	2,654	442,493	892	2,076,485
Building Maintenance & Repair	394	65,717	217	504,048
Fencing Expenses	139	23,125	146	338,974
Land & Farm Improvements	385	64,158	603	1,402,803
Other Farm Improvements	10	1,599	20	46,163
TRACTORS & SELF-PROPELLED MACHINERY:	1,423	237,221	1,636	3,806,578
Tractors	1,214	202,509	1,091	2,538,817
Tractors, New	765	127,544	537	1,248,780
Tractors, Used	450	74,965	554	1,290,037
Self-Propelled Machinery	208	34,711	545	1,267,761
OTHER FARM MACHINERY & IMPLEMENTS:	1,329	221,650	1,106	2,573,324
SEEDS & PLANTS:	1,521	253,567	1,733	4,033,222
Seed for Field Crops & Small Grains	823	137,258	1,379	3,209,915
TAXES:	1,595	265,965	1,153	2,683,170
Farm Real Estate	1,375	229,324	965	2,246,648
Other Property Tax 8/	220	36,640	188	436,522
Landlord Real Estate	343	57,127	591	1,375,598
AUTOS, TRUCKS & OTHER VEHICLES:	848	141,373	980	2,281,412
Autos	123	20,501	146	340,696
Trucks	582	97,118	732	1,703,182
Trucks, New	371	61,914	459	1,067,910
Trucks, Used	211	35,205	273	635,273
Other Motor Vehicles	142	23,754	102	237,534
AGRICULTURAL CHEMICALS: 10/	1,084	180,763	1,686	3,924,486
Custom Applied Pesticides	302	50,311	614	1,428,586
Not Custom Applied Pesticides	771	128,557	1,062	2,472,125
UNALLOCATED OTHER EXPENSES:	79	13,163	32	74,564

1/ Includes eleven states: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island and Vermont.
2/ Farm share.
3/ Total expenditure divided by number of farms.
4/ Totals may not add, due to rounding.
5/ Includes veterinarian fees, medicines, breeding fees, litter or bedding sawdust, purchase of capital equipment & repair and maintenance of livestock & poultry equipment and other supplies for livestock & poultry not on depreciation schedule.
6/ Includes equipment renting.
7/ Landlord expenditures are excluded.
8/ Includes landlord expenditures.
9/ Landlord expenditure included only in total.
10/ Includes seed treatments.

FARM BALANCE SHEET (Excluding Farm Households), MASSACHUSETTS, JANUARY 1, 1980 - 1984

ITEM	1980	1981	1982	1983	1984
			Million Dollars		
Assets:					
Real Estate 1/	783.6	807.0	804.2	783.9	837.7
Livestock and Poultry 2/	78.8	90.0	87.3	77.3	65.2
Machinery and Motor Vehicles 3/	149.3	150.6	153.9	160.2	156.7
Crops 4/	22.8	25.2	24.8	26.5	26.6
Financial Assets	69.8	64.4	71.5	72.1	67.6
TOTAL FARM ASSETS	1,104.3	1,137.3	1,141.6	1,120.1	1,153.8
Claims:					
Real Estate Debt 5/	67.3	74.0	82.6	86.3	88.3
Non-Real Estate Debt 6/	129.5	124.9	139.6	138.4	119.6
TOTAL FARM DEBT	196.8	199.0	222.1	224.7	207.9
Equity	907.5	938.3	919.5	895.4	945.9

1/ Excludes value of operator dwellings.
2/ Excludes horses, mules, and broilers.
3/ Includes only farm share value for trucks and autos.
4/ All crops held on farms including crops under CCC and crops held off farms by farm operators.
5/ Excludes debt on operator dwellings.
6/ Excludes debt for non-farm purposes.

FARM PRODUCTION EXPENSES, MASSACHUSETTS, 1979 - 1983

CURRENT FARM OPERATING EXPENSES	1979	1980	1981	1982	1983
			Million Dollars		
Feed	43.7	47.5	48.5	43.8	49.2
Livestock	1.4	1.4	1.5	1.0	1.1
Seed	8.8	10.0	10.5	10.6	10.2
Fertilizer and Lime	7.7	8.8	9.7	8.6	7.3
Repairs and Operation of Capital Items	34.9	40.3	41.7	40.2	38.4
Hired Labor	58.8	64.4	62.6	74.2	72.9
Miscellaneous	38.8	41.6	49.5	52.1	52.1
TOTAL CURRENT FARM OPERATING EXPENSES	194.1	213.9	224.1	230.5	231.3
Depreciation and Other Consumption of Farm Capital	52.4	58.3	62.8	63.7	63.2
Taxes on Farm Property	27.8	20.4	13.9	13.4	13.4
Interest on Farm Mortgage Debt	6.2	7.3	8.3	9.7	10.9
Net Rent to Non-Operator Landlord	--	.1	.4	.4	.4
TOTAL PRODUCTION	280.5	300.0	309.5	317.7	319.3

GROSS INCOME AND NET INCOME FROM FARMING, MASSACHUSETTS, 1960 - 1983

ITEM	1960	1970	1979	1980	1981	1982	1983
				Million Dollars			
Gross Farm Income:							
Cash Receipts from Farm Marketing	164.7	157.0	287.4	305.9	352.6	373.0	366.9
Government Payment	.7	.6	.6	.7	.8	.6	.7
Non-Money Income	15.5	15.1	47.7	47.0	47.2	48.5	49.8
Other Farm Income	.7	1.5	2.7	2.7	3.3	3.4	2.9
TOTAL	181.6	174.2	338.4	356.4	403.9	425.6	420.4
Farm Production Expenses	135.6	131.3	280.5	300.0	309.5	317.7	319.3
Net Farm Income Before Inventory Adjustment	46.1	42.8	57.9	56.3	94.4	107.9	101.1
Net Change in Farm Inventory	1.3	.2	3.4	2.9	-6.8	-7.0	1.5
Net Farm Income After Inventory Adjustment	47.3	43.0	61.3	59.3	87.6	100.9	102.6

CROP AND LIVESTOCK PRODUCTION: RANK AMONG STATES, MASSACHUSETTS AND NEW ENGLAND, 1984

ITEM	UNIT	MASSACHUSETTS			NEW ENGLAND		
		PRODUCTION	RANK	%U.S. TOTAL	PRODUCTION	RANK	%U.S. TOTAL
		1,000			1,000		
CROPS:							
Cranberries	barrels	1,663	1	50.1	1,663	1	50.1
Apples	42-pounds	2,310	13	1.2	7,428	8	3.8
Peaches	48-pounds	40	30	*	n/a	n/a	n/a
Corn for Silage	tons	620	33	.6	3,860	7	3.7
Hay, All	tons	300	44	.2	2,084	25	1.4
Potatoes	cwt.	580	31	.2	22,916	3	6.3
Tobacco	pounds	785	16	.05	3,609	15	.2
Sweet Corn	cwt.	713	8	4.8	n/a	n/a	n/a
Tomatoes	cwt.	152	17	.6	n/a	n/a	n/a
Maple Syrup	gallons	26	n/a	n/a	668	n/a	n/a
LIVESTOCK AND POULTRY:							
Eggs	each	268,000	36	.4	3,086,000	9	4.5
Milk	pounds	575,000	38	.4	4,626,000	7	3.4
Wool	pounds	73	35	.1	447	29	.5
Sheep	head	2.9	34	.1	177	29	1.7
Lambs	head	8	34	.1	186	36	.4
Hogs and Pigs	head	49	40	.1	98	35	.1
Cattle	head	16	45	*	39.6	27	.6
Calves	head	24	41	.2	12.9	22	.7

* Less than .05 percent

FARMS: NUMBER AND LAND, MASSACHUSETTS AND NEW ENGLAND, 1974 - 1985 1/

YEAR	MASSACHUSETTS			NEW ENGLAND		
	NUMBER OF FARMS	AVERAGE SIZE	LAND IN FARMS	NUMBER OF FARMS	AVERAGE SIZE	LAND IN FARMS
		Acres	1,000 Acres		Acres	1,000 Acres
1974	5,500	124	680	27,740	192	5,318
1975	5,800	121	700	26,120	197	5,135
1976	6,300	111	700	27,960	185	5,165
1977	6,200	111	690	28,300	182	5,155
1978	5,900	115	680	28,700	180	5,165
1979	6,200	113	700	29,900	173	5,165
1980	6,200	116	720	30,660	169	5,185
1981	6,100	115	700	30,920	169	5,225
1982	6,100	113	690	30,000	169	5,075
1983	6,100	110	670	30,200	167	5,045
1984	6,100	111	680	29,650	170	5,038
1985	6,000	113	680	28,750	169	4,863

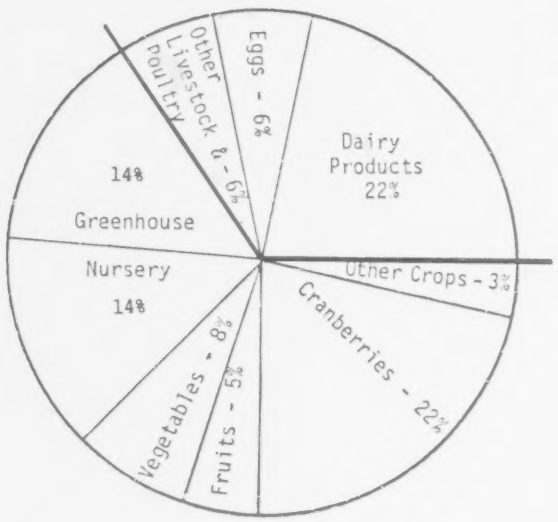
1/ A farm is a place that sells or normally would sell $1,000 of agricultural products.

CASH RECEIPTS FROM FARM MARKETINGS, MASSACHUSETTS, 1982-1984

COMMODITY	1982	1983	1984	COMMODITY	1982	1983	1984
	1,000 Dollars				1,000 Dollars		
CROPS				LIVESTOCK			
Hay	2,876	3,314	3,451	Cattle and Calves	4,474	9,837	6,814
Tobacco	14,953	4,542	3,475	Hogs and Pigs	7,765	4,624	4,416
Potatoes	3,159	2,998	3,865	Sheep and Lambs	397	373	552
Sweet Corn	9,492	10,640	10,339	Dairy Products	89,074	90,852	83,923
Tomatoes	4,350	2,820	4,104	Chickens	387	571	643
Misc. Vegetables	10,400	10,100	10,800	Eggs	21,910	20,020	24,253
Apples	15,344	14,694	14,726	Turkeys	2,378	2,782	2,750
Peaches	640	736	720	Misc. Poultry	2,831	3,475	3,422
Cranberries	59,588	73,465	84,995	Misc Livestock	3,417	4,727	5,049
Other Berries	2,065	2,270	2,550				
Misc. Fruits	285	370	390	TOTAL LIVESTOCK	132,633	137,261	131,822
Maple	566	397	507				
Forest Products	1,634	1,720	1,935				
Greenhouse/Nursery	92,000	100,000	107,500				
Misc. Crops	3,540	3,770	3,690	ALL COMMODITIES	353,525	369,097	384,869
TOTAL CROPS	220,892	231,836	253,047				

MASSACHUSETTS - 1984

LIVESTOCK - 34%



CROPS - 66%

UNITED STATES: CIVILIAN PER CAPITA CONSUMPTION OF MAJOR FOOD COMMODITIES (RETAIL WEIGHT) 1/, 1976 - 1983

COMMODITY	1976	1977	1978	1979	1980	1981	1982	1983 2/
	Pounds							
MEATS	153.0	152.3	146.9	144.8	147.7	145.2	139.3	144.2
Beef	94.4	91.8	87.2	78.0	76.5	77.2	77.2	78.8
Veal	3.3	3.2	2.4	1.7	1.5	1.6	1.6	1.7
Lamb and Mutton	1.6	1.5	1.4	1.3	1.4	1.4	1.5	1.5
Pork	53.7	55.8	55.9	63.8	68.3	65.0	59.0	62.2
FISH (edible weight)	12.9	12.7	13.4	13.0	12.8	12.9	12.3	12.9
Canned	4.2	4.6	5.0	4.8	4.5	4.8	4.3	4.6
Fresh and Frozen	8.2	7.7	8.1	7.8	8.0	7.8	7.7	8.0
Cured	0.5	0.4	0.3	0.4	0.3	0.3	0.3	0.3
POULTRY PRODUCTS								
Eggs	34.3	34.0	34.6	35.3	34.6	33.8	33.4	33.1
Chicken (ready-to-cook)	42.7	44.1	46.7	50.6	50.1	51.7	53.1	53.9
Turkey (ready-to-cook)	9.1	9.1	9.2	9.9	10.5	10.7	10.8	11.2
DAIRY PRODUCTS								
Cheese (excluding cottage)	15.7	16.1	17.0	17.2	17.6	18.4	20.1	20.6
Canned and Bulk Whole Milk	5.0	4.3	4.2	4.1	3.8	4.1	4.1	3.9
Fluid Milk and Cream (product weight)	263.9	259.7	257.1	253.0	249.5	245.3	241.7	245.1
Ice Cream (product weight)	17.9	17.5	17.4	17.1	17.3	17.2	17.5	17.9
FATS AND OILS - TOTAL FAT CONTENT	54.9	53.1	54.7	56.1	57.0	57.5	58.4	59.6
Butter (actual weight)	4.3	4.3	4.4	4.5	4.5	4.3	4.6	5.1
Margarine (actual weight)	11.9	11.4	11.2	11.2	11.3	11.2	11.1	10.4
Lard	2.6	2.2	2.2	2.4	2.4	2.5	2.5	1.5
Shortening	17.7	17.2	17.8	18.4	18.2	18.5	18.7	18.6
Other Edible Fats and Oils	21.5	21.0	22.1	22.4	22.7	23.5	23.2	24.8
FRUITS								
Fresh	81.3	79.4	80.6	81.2	86.8	84.0	84.3	91.8
Citrus	28.1	25.5	25.7	23.8	28.0	24.2	23.9	30.8
Noncitrus	53.2	53.9	54.9	57.4	58.8	59.8	60.4	61.0
Processed:								
Canned Fruit	18.6	19.0	17.9	17.8	17.4	16.4	13.1	13.0
Canned Juice	14.5	13.6	16.5	16.9	16.7	19.1	13.7	16.2
Frozen (including juices)	13.6	14.0	12.5	12.6	13.0	12.7	14.1	15.0
Chilled Citrus Juices	6.1	5.7	6.1	5.5	5.9	4.1	3.5	4.1
Dried	2.6	2.5	2.1	2.6	2.4	2.7	2.9	2.9
VEGETABLES								
Fresh 3/	92.9	93.6	95.4	96.4	98.8	96.2	70.3 4/	70.1 4/
Canned (excluding potatoes)	53.0	53.1	51.8	53.2	48.5	45.6	45.6	47.1
Frozen (excluding potatoes)	10.1	10.2	10.7	11.2	10.4	11.6	10.7	11.1
Fresh Potatoes	48.5	51.5	48.8	52.1	53.9	46.3	48.1	51.9
Frozen Potato Products	14.6	15.7	17.2	17.7	16.9	18.2	18.1	18.7
Sweetpotatoes 5/	4.6	4.0	3.8	4.1	3.8	3.4	4.4	4.5
GRAINS								
Wheat Flour 6/	119	116	115	117	117	116	114	116
Rice	7.1	7.5	5.7	9.4	9.4	11.0	11.8	9.8
OTHER								
Coffee	9.4	6.9	7.9	8.5	7.7	7.7	7.5	7.6
Cocoa	3.0	2.6	2.6	2.6	2.6	2.9	3.0	3.3
Peanuts (shelled)	6.2	6.3	6.8	6.8	6.5	6.4	6.7	6.7
Dry Edible Beans	6.0	6.2	4.8	4.7	4.6	5.7	6.0	6.2
Melons	18.3	19.1	19.8	18.9	18.9	18.8	20.4	n/a
Sugar (refined)	93.4	94.2	91.4	89.3	83.7	79.4	73.7	71.0
Corn Sweeteners 7/	37.3	39.8	43.3	47.2	52.7	58.8	63.8	69.4
Soft Drinks (gallon)	30.6	33.3	35.4	36.8	37.8	38.9	39.6	40.0

1/ Quantity in pounds, retail weight unless otherwise shown. Data on calendar year basis except for dried fruits, fresh citrus fruits, peanuts, dry beans and rice which are on a crop-year basis.
2/ Preliminary.
3/ Commercial production for sale as fresh produce.
4/ Not comparable to previous years due to crop reporting cutbacks.
5/ Table stock and processed.
6/ White, whole wheat, semolina, and durum flour.
7/ Fructose and glucose.
n/a = not available.